

# THE SOUTHERN PLANTER

DEVOTED TO  
AGRICULTURE, HORTICULTURE, LIVE STOCK AND THE HOUSEHOLD.

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# —THE— SOUTHERN PLANTER.

DEVOTED TO

**Agriculture, Horticulture, Live Stock and the Household.**

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Agriculture is the nursing mother of the Arts.—XENOPHON.

Tillage and pasturage are the two breasts of the State.—SULLY.

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T. W. ORMOND,	-	-	-	-	-	-	-	PROPRIETOR.
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43RD YEAR.

RICHMOND, AUGUST, 1882.

No. 13.

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## THE FARMER.

The natural wants of man are really very few, and hence even an ignorant, unambitious man may manage to eke out a living at farming, just as ignorant men live at other vocations. There are many persons that do it, but would a reasonable man point to such a case as a success? The labor of such an one is simply an animal exertion. In most cases this man lives in a shanty or miserable hut, and rears a family on a common level, so to speak, with the animals on his farm. He is known as a farmer, but the name does not correctly suit him. He is a botch at the business; a decided failure; the very reverse of what would be called a first-rate farmer.

The farmer who really masters the situation, not only accumulates money from year to year, but his farm grows better the longer it is worked. Every day his mind expands with experience, and, consequently, his calling becomes a real pleasure. The family is brought up in the path of usefulness, giving each member a liberal education. He instructs them in all the whys and wherefores of his own calling, and they grow up to follow in his footsteps directly to success.

To do all this correctly, calls for much more than a low grade of intellect. The successful farmer must be a teacher as well as a student. He must at least possess a large amount of one peculiar kind of learning; in other words, he must have a more thorough acquaintance with many important laws of nature relative to animal and vegetable life,



the character of soils and their relation to moisture, fertilizers, climate, temperature, etc., than is probably required in any other pursuit in life. It is true a man may be able to hoe corn decently, and not know very much, just as he might teach reading and yet be a laughing stock in good reading society, but such a man cannot manage a corn field year after year, make the soil more and more productive, coin money in the pursuit, increase his worldly comforts, and make that social, intellectual and moral growth which befits the true man. Unlettered men may, and often do, make passable farmers, but they possess good natural facilities, are close observers, industrious and energetic; can manage men as well as horses, and neglect no available resource for achieving success. Their want of school learning is usually more than counterbalanced by a natural aptness for making the most of what they possess.

The first-rate farmer must be the possessor of good reasoning powers, to enable him to understand the character of his soils, so as to know what crops are better adapted to them; what fertilizers should be applied; what treatment his crops should receive to meet the varying wants of a wet or dry season; what and how much live-stock would promise the best profit, and how to manage the stock in accordance with prevailing circumstances. He should also be able to reason well about fruits and vegetables; how to grow them best in his particular climate and soil, with an eye to exactly suiting the market; how to propagate by means of plants, cuttings, graftings or buddings; how to prune, shape and train trees; what fertilizers to apply and when, and when not, and at what age they should be allowed to bear fruit; what insect enemies they have, their habits, and the best means of their extermination; what implements are needed for the orchard or the garden to bring the best results, and so on.

Thus you perceive the business of farming is no mere routine, as many erroneously suppose. It is a business that calls for much head-work as well as hand-work. It is therefore recommended to men who wish to become first-rate farmers, to avoid too much politics, for it leads to ways that are dark and mean, and office-seeking; avoid country stores, where much precious time is thrown away, and bad habits contracted, both of which unfit men for the business of life. And lastly, the eleventh commandment, viz: Every one mind his own business and read his own agricultural paper. Do these things and you will have your reward.

M.

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Self-trust is the essence of heroism.—*Emerson.*

### TILE DRAINAGE.

Professor S. A. Knapp, of the Agricultural College, Ames, Iowa, writes as follows :

In the few remarks I design to make upon the subject of tile drainage, permit me call your attention to the importance of general land drainage as distinguished from the common, but mistaken, notion that wet lands only should be drained. That the surface water should be drawn from the slough is an accepted problem to be worked out as money and time permit; but the necessity of a general system of drainage for our lands is a proposition almost startling to the average farmer. Without entering into too minute a discussion, let us consider a few of the more important advantages of under-draining land.

1. It increases the depth of the soil in two ways. Frequently, after the surface is quite dry, there is so much water in the subsoil at the depth of a foot or more, that the roots of the more highly cultivated plants refuse to enter it, and are turned back to secure their nourishment near the surface; or the subsoil may be too hard for the more delicate fibres to penetrate, or penetrated, yield so scanty nourishment as to dwarf the top.

Under-draining lowers the line of excessive water beyond injury to roots, and it arrests the ascending water, whether from spring or capillary action. It allows the rainfall, loaded with volatile manures, to pass through the soil and be discharged from underneath, after depositing its fertilizing material, instead of flooding the surface and removing from the upper soil many substances useful to vegetation. Soil from which the water has no outlet but evaporation frequently becomes charged with poisonous matter, to the detriment of vegetation. Where there are under-drains these poisons are washed by the rain down through the soil and removed by the drain. This constant descent of water through the soil causes a similar descent of air through its pores, from the surface to the depth of the drain. "When the rain falls it enters the soil and more or less completely displaces the air which is contained within its pores. Thus, air either descends to the drains or rises into the atmosphere. When the rain ceases, the water as it sinks again leaves the pores of the upper soil open, and fresh air consequently follows." Thus, when under-drains exist, not only does every shower deposit its fertilizing ammonia, but it serves to force the fresh air through the pores, which produces conditions so healthful to vegetation.

It should be observed that the theory that the soil is exhausted because it does not produce large crops, is obsolete. Only a small portion of material is in a condition to become food for plants; the remainder is locked up in insoluble compounds, which are reduced by the alternate action of air and water. The soil, freed from the constant presence of water, becomes gradually looser, more friable, and sweeter. The hard lumps crumble and the subsoil becomes more porous, and is penetrated by the deep-rooting corn and clover; and when these decay, spaces are left for water and air.

2. Coldness of soil is due largely to the water it contains; remove this and temperature is raised from 8 to 10 degrees, which means a lengthening of the season about twenty days, or what is equivalent—the hastening of the crop. In some portions of Scotland, when a system of under-drainage has been carried out, especially in Aberdeenshire, it has been observed that the crops mature, upon an average, ten days earlier than twenty-five years since. The season is hastened in the spring by enabling the cultivator to get on to his land earlier by several days, and all through the summer it prevents loss of time in working the crop by prompt removal of the surplus water. Sometimes a week of valuable time at corn planting, or during corn cultivation, is lost by reason of excessive rain; and a crop is lost or seriously injured which drainage would have made a success.

Thus is the farmer rescued from the fickle dominion of the uncertain seasons.

3. On wet land many of our best manures are almost thrown away. High cultivation, then, is only possible upon land naturally or artificially drained. Thus is the farmer subjected to great loss by actual waste, and a barrier is placed against his best efforts towards progress. Drainage can give him courage and hope and a constant return from honest toil and liberal cultivation.

4. Two important conditions in plant growth, temperature and water, should be more generally understood. Professor Bessey has shown that seeds refused to germinate till a certain temperature of soil is reached, and that the growth of the plant is accelerated by increase of temperature till a certain point, designated the optimum, is reached. An increase of the temperature of the soil by under-drainage causes, therefore, more rapid growth of the plant quite a portion of the season. But heat is not the only aid to growth; the amount of water in the soil has an equally direct bearing.

Plants take their food in a solution of water, and there is a proportion of solid matter to water that is the best for nourishing the plants;



an increase of water from the ratio affects the plant as diluting milk with water affects the growth of the calf.

How much and how long plant growth is retarded each season by excessive water, would make an interesting table.

Under-drainage speedily withdraws the water, and leaves only the normal amount in the soil, thus uniformly affording to the plant the best condition of moisture as well as temperature.

Without further suggestions upon the value of under-drains—let us consider the method of construction.

1. The size of the tile. In no particular in drainage has a greater mistake been made than in the size of the pipes. Frequently a two-inch pipe has been laid to serve the purpose of main drainage on forty acres of land.

It would take a two-inch pipe about twelve days, running at the rate of four miles per hour, to discharge an inch of water on forty acres, or six days to dispose of one-half that amount, allowing the other half to evaporation and retention in the soil; a six-inch pipe would remove this surplus water in sixteen hours, thus enabling the farmer to work his land on the day following the shower. Main drains, extending one-half mile or more, should not be constructed of tiles less than six inches in diameter, while three or four-inch tile are used for branches. Small tiles are passing out of favor.

For perfect drainage branches should be laid from the main, on each side, once in two or four rods, depending upon condition of soil and depth of drain.

The tile should be from three and a half to four feet deep. Probably four feet, all things considered, is a very satisfactory depth. Much less than this places the tile within reach of roots from some of the cereals and grasses, which may penetrate in such quantities as to entirely obstruct the passage.

In laying past willows or through orchards the joints should be cemented.

A very good grade for tile is one inch fall to the rod. One-half this may work if the tile be carefully laid.

[We may say that drainage is somewhat a hobby with us. We see so little attention given to it, and such great losses resulting from the neglect of it, we are disposed to press the subject. The article of Professor Knapp, which we have copied, is taken from the *Farmer's Advocate*, London, Ontario, Canada, one of the most valuable of our foreign exchanges.

The four propositions which Professor Knapp lays down in respect to the value of thorough drainage, and the importance he attaches to under-drainage, we readily concede. When, however, he comes to deal with the practical part of the subject, he speaks of

only one method of under-drainage, and that with *tiles*. We have spoken of other methods which, for good reasons, we prefer under most circumstances; and without repetition, we refer the reader to the *Planter* of June 15th of this year. Stiff, or tenacious, soils which retain water on or near the surface during the winter and spring months, are especially hard, cold and dry during the summer. Deep plowing and under-drainage will thoroughly change the physical texture and character of such soils, and make them, with the use of proper manures, or by green fallow, as good as any other. The under-drains draw down the surplus water from the surface, and the air penetrates and warms the land. The mechanical condition of the soil is gradually, and even quickly, changed for the better. On such lands the drains are fed by *percolation* and the material used should be such, and so disposed, as freely to admit into the drain all the water which is *drawn* to it. Closely-fitting, *round* tiles, or pipes, will not do this; but the *horse-shoe* tile, which is open at the bottom, will. So will loose stones or the inverted plank troughs, mentioned in our article before referred to.

Professor Knapp mentions three and a half to four feet as the proper depth for under-drains. This is well when the level of the outlet will permit it; but we have known good and effective secret drains which were from two to two and a half feet deep. Every good farmer well knows how to construct his secret drains to *dry out* the wet spots in his bottom lands, and will appreciate their importance.

This subject admits of many amplifications. We have had in Tidewater Virginia some experience when the tidal overflows had to be shut out by tide-gates, and there were spots of valuable land that could be under-drained into the *tidal guts*, or otherwise be of little value. So that all farmers, however situated, have this important subject before them.—ED. S. P.]

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### BROWNSEGE HAY AGAIN.

*To the Editor of the Southern Planter:*

I was much interested by "Shelby's" account of his experiments with broomsedge hay in your issue of the 15th June; and as my own experience tends to confirm the view he takes, I give it, only asking that any farmer who possesses a field well set with broomsedge and is incredulous of its virtues as a hay grass, will give it a candid and fair trial. In the summer of 1877, casting around for some addition to my supply of provender, I was attracted by some patches of rough meadow grass growing upon the low spots of a field which since the first of the war had been unenclosed until that year. I started the mower and secured several loads of coarse and inferior hay. In cocking and handling this hay after cut, I noticed that the hay near the edges of these spots which was much mixed with sedge was much the best and most attractive in appearance. Acting upon this suggestion, I cleared the bushes from a few acres of the best spots of sedge and mowed the grass. The field had not been burnt over the preceding year, consequently there was a good deal of the old grass and stems mixed with the hay, which, of course, injured its value. But on the whole I was much



pleased with the experiment. The following year I mowed the same piece of ground and got a large bulk of fair hay. Although this last lot was cut after the grass was in bloom, my stock ate it heartily and throve upon it. An immense addition is here offered by nature to our long-food supply, and it is only necessary to exert ourselves a little to reap the benefit thereof. Poor indeed is the farmer who does not possess a few acres of broomsedge, and poor the land upon which the sedge does not grow luxuriantly enough to amply repay the labor of harvesting. The bulk of the prairie grasses manufactured into hay on the plains of the Southwest are of the same character, but much larger and coarser than our broomsedge. Vast quantities are cut upon the prairies and find ready sale in the towns at \$8 to \$10 per ton. I think by cutting the grass before it begins to stalk, the quality of the hay will be much improved, besides being able to obtain several cuttings the same season. Many of us find it extremely difficult to secure good sets of the cultivated grasses, even with the utmost care, and here we have a grass that is perennial and self-distributing, and that makes fair growth upon lands where the other grasses would starve, capable of being profitably converted into hay. I ask, then, is it not the part of common sense and of wisdom that we should avail ourselves of this provision of nature? Hoping that not a few of my brother farmers will test the merits of broomsedge hay this season, and being assured that naught but good will be the result, I close this already too long communication with best wishes for the success of your time-honored and sterling old journal.

*Gloucester county, Va.*

“A YOUNG VIRGINIAN.”

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### WHEAT CULTURE.

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[Following up our *plea for wheat* in our note to Dr. Pollard's article in our last issue, we offer the following extracts from an address before the East Tennessee Farmers' Convention by the Hon. John M. Meek :—Ed. S. P.]

After selecting the variety of wheat, the next great point is cleansing the seed thoroughly from trash and small grains, and only the largest, plumpest grains sown. The ground should either be harrowed or rolled before sowing, in order to give a uniform depth of covering and distribution of seeds. As to the quantity to be sown to the acre, reference is made to the experiments of Prof. J. M. McBryde, given in the annual report of work on the Agricultural College farm for the year 1881. These experiments were made with special reference to the quantity of seed necessary to the acre, and are very valuable in deter-

mining this question. My own practice has been to sow from four to five pecks to the acre.

Having determined these points, we are now ready to put the seed in the ground. From now on our work is to protect the crop by a rigid exclusion of all kind of stock, and a patient waiting for the harvest, which will come in due time according to promise.

If we have observed and faithfully performed all the work indicated, we may reasonably expect a generous yield running up to the maximum. Indeed, my own belief is, that with such intelligent labor we may, nine years out of ten, certainly realize a maximum yield per acre of 15 to 25 bushels. And if the average yield in Tennessee were brought up to fifteen bushels per acre, the aggregate yield of the State would reach the enormous figures of twenty-seven and one-half million bushels. There is no reason why this result may not be attained by intelligent, persistent effort in the next five years. This would give our people a surplus of twenty millions of bushels of wheat, which at one dollar per bushel would put into the pockets of farmers the snug sum of \$20,000,000. The work previously indicated is applicable largely to uplands and thoroughly drained river lands. Too much moisture is sudden death to the wheat plant. There are thousands of acres of river lands in the State which for lack of proper drainage are devoted entirely to the production of corn. These lands, if thoroughly and permanently drained, might be made to produce from 25 to 40 bushels of wheat per acre. This would help swell the aggregate as well as the average yield in the State.

Wheat farming is progressive because it necessitates the cultivation of the grasses and the growing of horses, cattle, sheep, etc. This kind of farming is near to nature's heart, because nature is allowed and invoked to do her legitimate work in the spontaneous growth of food for the kinds of stock named above, upon which they will grow fat and enrich their owners, without the weary plodding after the plow required in the cultivation of corn, and hogs. Let us not be misunderstood as to the production of the grand cereal, corn, for it stands at the head of the list in value of the food producing cereals. But it is a fearfully exhaustive crop on land. The inference is that wheat culture, to be successful, necessitates the culture of the grasses, and this includes the raising of horses, cattle and sheep, and this promotes the renewed fertility of the land, and lands with this cultivation rapidly improve in productive capacity, and thus the yield of corn per acre may be doubled, and a less number of acres required in the cultivation of corn, and, as a final result, less following of the plow.



To my brother farmers let me address myself in sufficient length to suggest the importance and absolute necessity of acquiring the knowledge necessary to intelligently handle your farms in order to bring up their productive capacity to its highest point. In this way only will we be able to beautify our homes and render them attractive to our sons and daughters. In this way we may retain the boys on the farm, and make progressive farmers of them, and intelligent farmers will make themselves felt in the councils of the government, both national and State.

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### FARMING.

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The article "Farming as it Ought to be," by Col. Ingersol, is well written and attractive in style, and, doubtless, by the amateur farmer, is considered as *ne plus ultra*. But to the practical farmer in the Southern States nearly all of it is mere theory, and inapplicable. To pay ordinary expenses, the farmer has to work not only eight hours daily, but twelve hours through seven or eight months of the year; and if he does not do it, he finds farming a losing business. He must remain in the field either as a work hand or a superintendent, allowing no waste of time to any laborer. He has no time to return from the field, take a bath, &c., and if he does, his hands, white or black, will idle away the precious hours which should be devoted to continuous labor. A professional man or farmer without an active superintendent makes nothing, and oftener loses money by farming, and which he cannot make up by improved implements or stock. The old farmers did not, through the South, in *ante bellum* days, carry on farming in a slip shod way. They managed better than they do now. If not in the field, the owners of plantations employed skillful overseers, and everything was conducted systematically. The laborer as a slave made more money than the same laborer as a freeman. The statistics of the Southern States prove this. There was more corn, cotton, sugar, rice, wheat, &c., to the *work hand* than at present. The sugar crop of Louisiana has fallen off over one-half, while the colored population has increased. In fact, the white people, reduced to poverty, have been compelled to work as laborers, and in all the Southern States a large portion of the crops has been made by white labor. The last U. S. Commissioner of Agriculture admitted this as a fact. In the border States and in Louisiana half the crop is raised by white labor. In Texas, over half. Before the war every colored girl or boy ten years of age earned more



than their support, while now they are going to school or idling their time away.

Farming in the South was a success, but the trouble was that white people did not bring up their families to labor or to save. It was a rule to spend all the hands on a farm made, little or much, and idle habits produced extravagant living, which mortgaged farms and necessitated the sale of slaves. Prosperity was impossible from such habits, and though since the war the whites generally, male and female, are industrious, yet the profits of farming are too little to indulge in the useful and the beautiful, so eloquently portrayed by Mr. Ingersol. Very few persons can afford to decorate their dwellings inside or outside. It takes all their time and efforts (and even anxious care, which kills the body) to provide a plain support for their families. The bright side of farming is confined to prosperous city people, who can afford to spend more on a farm than they take from it. The life of most farmers and of their families is one of drudgery, and will continue to be so, from the slip shod domestics of the household; and unless the housekeeper rises early and attends (not pretends) to everything, household cares lessen the pleasures of farming life.

What has been said relative to the cultivation of the feelings will meet with universal application. Gentleness and forbearance will meet with greater and more willing endeavors to please than rudeness and roughness, both on the farm and in the house. Civility and kindly consideration are better civilizers than the fractious and overbearing, and domestics are not slow in finding it out. Necessity has driven the Southern whites, male and female, to greater industry and economy, and possibly the next generation may find farming life less laborious and more pleasant than it is at present. Until then, "we learn to labor and to wait."

*Hanover county, Va.*

C. R. CULLEN.

[We fear our correspondent has mistaken the general scope of Col. Ingersol's address. The farmers have a chronic way of complaining, and fail to see how their products control the business of the world, and, by consequence, they may be "Lords of the situation." It will not do to underrate themselves, and complain of peculiar hardships. Every business has its hardships, and are felt as keenly as those of the farmer. In our opinion, those of the farmer are the lightest of all. If we had time for details we could show why this is so. If the farmer would conform himself to the same regular accounts and business habits of a good city merchant, he would understand where his *gains* and his *losses* are, and by proper intelligence would pursue the one and avoid the other. In addition to a proper system of accounts, he should keep in view these or similar plain rules:

1. Do not cultivate *poor land*, and trust to Providence in the matter of rain and sunshine for results.

2. Prepare and cultivate all land well, and cultivate *only so much* as can be well manured, or such as may have a native fertility for the crop which is planted or sown.

3. A regular rotation of grain and grasses are essential to permanent improvement.

4. Stock must be kept and well fed (and no more than can be so fed and pastured) to add to the manure pile and the receipts arising from the sale of their increase.

5. Labor will pay, white or black, when you do not compound with it by an interest in results, or by non-payment when due. Discharge it when not efficient, and be not afraid that the vacuum cannot be filled. You may meet with some temporary inconvenience, but it will be all well in the end. Fair wages, promptly paid, will always command labor.

6. The beautification of your homes is one of the most interesting points Col. Ingersoll has made. It brings pleasure and satisfaction, and may be done at odd hours with less trouble and expense than one who has not tried it would imagine. The well-kept front yard of the plainest country house is attractive and pleasant, and should be the work of the wife and daughters, mornings and evenings, and thus give but little obstruction to regular household duties. The farmer should do his part also. Although his house may be humble, it should be neat and well kept. Fences which enclose his house and farm-buildings ought not to be dilapidated, inviting his stock to vicious and uncontrolled habits of trespassing. His gates should not sag so that a latch becomes useless and he is compelled to resort to a primitive *fence rail* to fasten them, encouraging ill-temper in himself and all who may have to open them. His buildings, however plain, should be well covered for the protection of his crops and stock, and a little *whitewash* should be used in proper places for the purpose of neatness, health, and comfort. In this connection we quote from a brother editor of the *Rural Messenger*, who says: "About one-half, or more, of our farmers live in such a way as to produce the impression that they are mere denizens, sojourners, campers, who know nothing and care nothing for the refinements, comforts and luxuries of an established and constantly improving home. If there is need that the agricultural class be aroused on one subject more than all others, it is attention to such neatness of surroundings as refine the family taste, and make the sons and daughters feel that they are the equals of the city-bred boy and girl." The general result of such attention to the pleasant features of a home, will be pleasure and satisfaction to its occupants, and are the necessary concomitants of thrift.

7. The reading of agricultural papers will afford information on questions of the farm and household, and in many minor matters ideas will be caught, and may be improved upon. Through this channel farmers and their families, however remotely separated, are brought together and become mutually sympathetic. They divide trouble, and all learn the best means for avoiding it. What one does and thinks is read of by all, and thus information is imparted and received. Farmers, no more than men of other professions can afford to rely upon the knowledge which their own brains can give them. They must, to a great extent, learn of others, and this must be done by reading. So that an agricultural paper is one of the best of farming tools.—ED. S. P.]

It is stated that the Spanish Government, urged by the scarcity of wheat in Southern Spain, has issued a memorandum setting forth the high prices of grain in the districts most affected, and stimulating Hungarian exporters to pay attention to this outlet for their products. The recent tariff reform in that country looking to greater freedom of trade, does not extend to protectionist countries like America, therefore our farmers cannot take full advantage of the present crop shortage in Spain.



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### WORKING UPWARD.

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To advance agriculture so that it shall do better for those engaged in it, and at the same time add greatly to the public wealth, it must be appreciated better. Farmers themselves fail in this respect. The very common lack of intellectual culture about them leads them to think that it is a business of very limited possibilities, good enough for a man who has little ambition, capital or acquirements, but one which a really "smart" man can very properly shun. For such, a business pursuit (as if farming were not business), or the law, or medicine, or merchandizing, or railroading, or speculation, is the right field. "Anybody can be a farmer," but he can't be much else.

Just now there is a turn, and there is apprehension in the business world. Stocks are at standstill or declining. Gold is being shipped to Europe by millions each week. Why is this? Because there was a short crop in the country last year. Although these great business men and railway capitalists can sneer at an individual farmer as a man of very little account, they are filled with fear and apprehension when his class, as a whole, for any cause, does not pour into the world's market a crop to equal the demand. They take a deep interest in the aggregate production of the farmers if not much in the individuals. If agriculture in this country were controlled and carried on by a few individuals, as a few individuals now control our great railway lines, what important personages those few "farmers" would be! How the world of capital would listen to their opinions and watch their movements on the financial chessboard! But, as there are some millions of farmers instead of only six or seven to match the six or seven railway magnates who now put on transportation traffic "all it will bear," the many can be circumvented in detail, and are not of half as much importance as when consolidated into an army.

Cannot farmers see a lesson in this thought? Ought their business to always stand in the background in influence and the respect of those who achieve wealth and influence by merely handling their products? Is it really a business which requires little thought, culture or capital? Is it so narrowing in its influence on men's minds and manners that those engaged in it are not as well qualified to take part in governing the country as the small-minded, spouting, impudent lawyers they every year elect to Congress or to the Legislatures, after they forced themselves on the ticket? Of course not. It is only because the mass of men, and of farmers themselves, lack a proper appreciation



of its character. The mysteries of business, of law and of medicine are trifles compared to the mysteries of soils, air, moisture, manipulation, fertilizers, insects, etc., all acting in concert to produce or retard a crop. The man belittles his calling who is content year after year to pursue a routine course, and imagine that he has learned all about it that is worth knowing, and that the best agriculture can ever do any man is to supply in moderation his few animal wants—coarse food for his body and little for his mind, shelter for his family against sun and storm, and perhaps a shed for his cattle. And because this is done, and because a little learning and success are dangerous to some envious minds, we have the spectacle of many illiterate and a few ambitious men arrayed almost solidly against any general movement which is to bring agriculture into something like an organization in this country and claim that public recognition which its vast importance in the aggregate that the greatest good to the greatest number shall be consummated. When the farming interest prospers every other legitimate interest prospers, and so without waiting for it to advance itself as best it may, or to carp and sneer at its failings and rusticity, or to compel it to remain in the background, every intelligent man should welcome any influence that will advance and consolidate it. Every township, county, State or national organization which disseminates agricultural information, or adds to the attractiveness of farming, is a move to be encouraged. Every man that stands up to fight against progress or organization on the ground that agriculture can take care of itself, or needs no aid, or deserves none, is at best a poor reasoner, drawing foolish conclusions from weak and narrow premises. All other great interests work together and sustain each other, but that the greatest and most important of all should be organized, and through such an organization and kindred influences be educated up to its own importance and power, seems almost a crime to some, if we may accept their statements.—*The Weekly Press*.

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MULCHING.—A member of Oneida Community, writing on the importance of mulching fruit trees and plants of every kind, says that he mulched a row of the Franconia raspberry, and also one of the Philadelphia, side by side. The effect was very marked. While the Franconias, which were not mulched, were literally scorched and the leaves crumpled in the sun, the row which received the mulching carried through double the crop of fruit. The material used for mulching was old, half-decayed buckwheat straw, etc.

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A NOVEL WAGER.

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Protection versus Production.

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PUT UP OR SHUT UP.

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Do we understand our esteemed contemporary, the Macon Telegraph, as undertaking to declare that the farmers of Georgia are a lazy, thriftless set, who are not entitled to the benefits of protection, because they are not industrious enough to make a profit of 20 per cent. on their business?

This puerile attempt to avoid the force of the proposition made to the *Constitution* by Sunday's Telegraph and Messenger will neither deceive the farmers of Georgia, to the prejudices of whom it appeals nor will it screen the *Constitution* from the unfavorable criticism invited by its ignorance of the subject under discussion or disregard of the truth. The query quoted above needs no answer from us; we simply reiterate every proposition made in the first instance, and re-challenge the *Constitution* to a test. Let it "put up or shut up" Our position and challenge are as follows—we quote from our issue of the 28 inst.:

We do not hesitate to say that five to twenty-five thousand dollars invested in cotton planting in Georgia, upon the intelligent basis that must characterize all successful investment in cotton manufacturing, and managed with the same care, industry and sagacity necessary to manufacture successfully, will pay more than the same amount invested in the mill in which Mr. Howell is interested.

To prove that—we mean what we say—we are willing to test the matter, and to this end will propose to put, say, five to ten thousand dollars in agriculture, under proper supervision, and keep an accurate account of the same for three years commencing January, 1883. We will wager an equal amount that we will show larger profits at the end of the time than Mr. Howell will realize on an equal amount invested in the stock of his company, to be determined upon actual cash earnings of farm and factory, without any reference to speculative profits of either.

We desire to do this chiefly to definitely dispose of an important question; at the same time we propose, if the *Constitution* is silly enough to back the negative side as its insinuations would intimate, to teach it a lesson that will not be lost upon its future reliability and usefulness as a public journal.

[We copy the above from the Macon Georgia Weekly Telegraph Messenger. It is our business to bet on production, but the *ins* and *outs* of trade and commerce may beat us, and therefore we await results.—Ed. S. P.]

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OIL THE BEARINGS.—New England Farmer: Castor oil is largely used for oiling axletrees, the bearings of grindstones, mowers, etc. A small proportion of kerosene added to the castor oil and thoroughly shaken up with it, renders it less liable to gum.



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**FARMERS AS EXPERIMENTERS.**

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There is no branch of labor that affords better opportunities for making experiments than farming, or where there is greater need of efforts in this direction. Theoretical farming may do very well on paper, but the practical results, when the theory is put to the test, alone interests the farmer. The farmer learns more by experience in regard to the best methods to be pursued in the various branches of farm work than from any other source, and his experience is largely made up of experiments. Take, for instance, the numerous new varieties of fruit and vegetables which are offered to the public; nothing but actual experiments will determine which are valuable acquisitions and which are worthless. I have made numerous experiments in this line, and while in many instances the results have been unsatisfactory, I have never regretted the time, labor or money expended in this direction.

Now as the season of busy farm work has returned we farmers should experiment as we go on with our daily tasks. It was by experimenting with various substances that a remedy was discovered from the potato beetle. It was found that Paris green would kill the beetle and the larvæ, and do it every time. Now let us direct our attention to the cabbage worm and experiment upon him. Of course we cannot use Paris green or any other deadly poison on our cabbages, so we must experiment until some other sure and certain remedy is found. We hear of this and that remedy; but as yet there has been no *sure* specific for this pest of the farmer. Let us find one if possible.

Last season a blight, or, rather, a species of fungus growth, appeared on the small branches of the quince tree. I had some twenty-five young trees thus badly affected. I did not know what this new disease was, or how it would affect the tree if left to itself. As an experiment, I cut off all the diseased twigs or branches and burned them up. The trees made a good growth and are to all appearance healthy this Spring, but whether the disease will again put in an appearance this season I do not know. If it does, I shall experiment further in its cure. In making these farm experiments our farmers should bear in mind that others are interested in these matters, and the result should be carefully watched and noted down for the benefit of brother farmers, and given to the agricultural public for what they are worth. Practical experiments should not confine themselves to the successful experiments alone, but give the failures also. We often are as much benefited by reading of a failure in this or that experiment as in any other way. Like a lighthouse it bids us avoid the shoals.—J. P. L. in *American Cultivator*.



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**AN IMPORTANT DISCOVERY.**

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A new scientific discovery is announced in Europe. Professor Barff says that he has produced a compound of boracic acid and glycerine, called boro glycerine, analogous in composition to natural fats, and of powerful antiseptic qualities. For use it is mixed with about fifty times its own weight in water, the articles it is intended to preserve being immersed in liquid and kept in closed but not hermetically sealed vessels. This diluted mixture can be produced at less than 25 cents per gallon. It will keep perfectly fresh and sweet for months any food which can be surrounded by it in the containing vessel, and the same liquid may be used over and over again. Change of temperature does not affect it. At a meeting of the English Society of Arts, recently, when Professor Barff explained his invention, the audience tasted fresh turtle, oysters and pigeons from Jamaica; mutton sent last August from Falkland Islands; sardines from Spain, and various kinds of fish, lobsters, steak and sausages purchased in England three months ago. Letters were read from the Bishop of the African missions at Zanzibar, testifying as to the condition in which some Devonshire cream has been received from the Professor; and from residents in Jamaica to the same effect. Milk treated with glyceride was used at a college near London, containing 300 persons, during the whole of the summer months last year, without any one suspecting the presence of anything unusual. Dr. Russel, Professor of Chemistry at St. Bartholomew's Hospital stated that without the knowledge of Professor Barff he had made experiments on cream and meat, and in every case they were perfectly successful.

The value of this new invention is obvious. Household economy and comfort will be greatly promoted by it, while distant countries can interchange commodities with more freedom than ever, and travelers upon the sea may enjoy all the table luxuries the earth affords.—*Maine Farmer.*

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**DRAINAGE IN OLD TIMES.**—*Irish Farmers' Gazette:* Under drains were used by the Romans and constructed of wood. Even brush drains have been made in various parts of England. Thorough drainage came into practice about the middle of the present century, through the exertions of Mr. Smith, of Deanston, and for a long time stone was the principal material used in their construction. They are either thrown in promiscuously or laid out in throats or channels. When ties or pipes came into use stones were laid around them, but it is found that less soil percolates into the tile when the earth is close around it.

## FARMERS AND FARMING IN VIRGINIA IN THE OLDEN TIME.

## No. 1.

[Extracts from the Journal of ——— Glover, written in 1672.]

*The shores* all along the *bay* and *rivers* are for the most part sandy, but only in some points there is some shingle cast up; but the earth affordeth very few stones, and those that are there, are almost all of them hard and transparent. I have taken up several stones that would cut glass as well as any diamond. And I do verily think that there are some stones gathered there that do abate the price of diamonds; for I have seen several rings of Virginia stones which in my judgment have equalled diamonds in lustre.

*The cliffs* of all the rivers are full of great veins of *iron* mine, and in some places of the country I have seen rocks of the same to lie a foot above the earth, and generally all the highlands under the mould are a mere rock of iron. But an iron work would cost £3,000, and the country being generally poor, they were discouraged from running this mineral by reason of the charge. Though I believe the true reason is, their being so intent on their tobacco plantations, that they neglect all other more noble and advantageous improvements.

They distinguish their *soil* in three sorts, viz.: high, low, and marshy land, all of which have some sand mixed in them, that makes their land warmer than ours in England. The *high* lands are most sandy, but do, notwithstanding, bear very good crops of tobacco, only it does not hold its strength so long as the *low ground*, which is very rich, being a blackish mould about a foot deep, or somewhat more, and will hold its strength for seven or eight crop successively without manuring. Their *marsh lands* bear sedges and rushes after the manner of ours, and of these they have not attempted any improvement as yet. Their land in general is as good and fertile as the land of England. When the strength of their land is worn out, they never manure it to bring it in heart, but let it lie for pasture, for all men's cattle to graze upon, and clear more ground out of the woods to plant in.

As to the *fruit trees* of the country, it affords great plenty. For there are few planters but that have fair and large *orchards*, some whereof have 1,200 trees and upwards, bearing all sorts of English *apples*, as Pearmain, Pippins, Russetins, Costards, Marigold, King's Apples, Magitens (?), Batchelors, and many others, of which they make great store of cider.

Here are likewise great *peach orchards* which bear such an infinite

quantity of peaches, that at some plantations they beat down to the hogs 40 bushels in a year.

Here are also great store of *quinces*, which are larger and finer than those of England, and not so harsh in taste. Of the juice of these they also make quince-drink.

Here are likewise *apricocks*, and some sort of English *plums*; but these do not ripen so kindly as they do in England.

There are some sort of *pears*, but at very few plantations. I have seen the Bergaming, Warden, and two or three other sorts. And these are as fair, large and pleasant as they are in England. Here grow as good *figs* as there do in Spain, but there are few planted as yet. Those that take pains to plant *goose-berries* have them; but I never saw any of our English *currants* (*Ribbeneis*) there. And it is observed that *oranges* and *limons* will not grow there, though they do in more northern countries.

I have almost forgot to mention their *mulberry* trees, whereof they have good store about their houses. These were planted at first to feed silk worms, but the design failing, they are now of little use among them.

The meanest planter hath store of *cherries*, and they grow all over Virginia as plentiful as they are in Kent. The cherry trees grow more large generally than they do in England, and bear more plentifully without any pains-taking of digging about them and pruning them.

In the woods there are abundance of *vines*, which twine about the oaks and poplars, and run to the top of them. These bear a kind of claret grapes, of which some few of the planters do make wine, whereof I have tasted. It is somewhat smaller than French claret, but I suppose if some of these vines were planted in convenient vineyards, where the sun might have a more kindly influence upon them, and kept with diligence and seasonable pruning, they might afford as good grapes as the claret grapes of France are.

Their *gardens* have all sorts of English pot herbs and sallets; they have cabbages, coleworts, colly flower, parsnips, carrots, potatoes, and yams; and such herbs as grow wild in England, and do not grow there, they plant, as wormwood, featherfew, houseleek, *carduus benedictus*, rue, coriander, enula, and the like. They have likewise in their gardens roses, clove-gilliflowers, and variety of other sorts of flowers.

All that the inhabitants give their *cattle in winter* is the *husks* of their Indian corn, unless it be some of them that have a little *wheat straw*. Neither do they give them any more of these than will serve to keep them alive, by reason whereof they venture into the marshy grounds, where many of them are lost.



They have as great plenty of *horses* and as good as we have in England. As to their *sheep*, they keep but few, being discouraged by the wolves, which are all over the country, and do much mischief among their flocks.

Their manner of planting and ordering *tobacco* is thus: In the twelve days they begin to sow their seed in beds of fine mould; and when the plants be grown to the breadth of a shilling, they are fit to replant into hills; for in their plantations they make small hills about four foot distant from each other, somewhat after the manner of our hop yards. These hills being prepared against the plants be grown to the forementioned bigness (which is about the beginning of May); they then in moist weather draw the plants out of their beds and replant them in the hills, which afterwards they keep with diligent weedings. When the plant hath put out so many leaves as the ground will nourish to a substance and a bigness that will render them merchantable, then they take off the top of the plant. If the ground be very rich, they let a plant put out a dozen or 16 leaves before they top it; if mean, then not above 9 or 10, and so according to the strength of their soil. The top being taken off, the plant grows no higher, but afterwards it will put out suckers between the leaves, which they pluck away once a week, till the plant comes to perfection, which it does in August. Then in dry weather, when there is a little breeze of wind, they cut down what is ripe, letting it lie about four hours on the ground, till such as the leaves that stood strutting out fall down to the stalk. Then they carry it on their shoulders into their tobacco houses, where other servants taking of it, drive into the stalk of each plant a peg; and as fast as they are pegged, they hang them up by the pegs on tobacco sticks, so nigh each other that they just touch—much after they hang herrings in Yarmouth. Thus they let them hang for five or six weeks, till such time as the stem in the middle of the leaf will snap in the bending of it; then, when the air hath so moistened the leaf as that it may be handled without breaking, they strike it down, strip it off the stalk, bind it up in bundles, and pack it into their hogsheads for use.

Sometimes they are forced to plant their hills twice or thrice over, by reason of an earth-worm which eats the roots; and when the plant is well grown, they suffer damage by a worm that devours the leaf, called a "horn-worm" (an *eruca* or caterpillar) which is bred upon the leaf. If these worms be not carefully taken off, they will spoil the whole crop.

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AFFLICTION, like the iron-smith, shapes as it smites.—*Bovee*.

## THE SILO QUESTION.

CAPT. P. R. STETSON'S EXPERIENCE.

At the recent meeting of the Berks County, Pennsylvania, Agricultural Society, Capt. P. R. Stetson gave an interesting description of a Silo on his farm in Heidelberg township, near Womelsdorf.

I made my Silo in the wagon shed, a space at the end of the barn, 30 feet long, 14 feet deep, and 12 feet wide. By using this place I had already the sides and back walls, each 26 inches thick. I then put up a front wall of the same thickness, with double doors, 6 feet high and 3 feet wide. A good coating of cement on sides, ends and bottom was applied, and I had as good a Silo as could be built. I planted four acres with Southern white corn, the land having been prepared with a heavy coating of manure. The corn was in the ground the 15th of June, but the most of it, owing to worms and bad seed, had to be replanted. The drills were four feet apart. By August 12th the corn was ready for cutting, ears the size of one's thumb having formed, and the stalks being full of milk. Owing, however, to the severe drouth, the corn was not in the condition it should have been. We began to pit it on the 12th of August, eight men and boys, with one four-horse wagon, having been occupied five days in doing the work. The corn was cut with a common knife, as near the ground as possible, taken to the barn and run through a fodder-cutter, cutting it in pieces half an inch in length. Two men were in the pit to spread and tramp it down. I could not quite fill the pit, owing to the corn giving out. Over the fodder six inches of long straw was spread and upon the straw two-inch planks were placed, weighting it with stone and sand in bags—1,000 pounds to each square yard of surface. The cost of the ensilage was as follows:

Plowing and cultivating four acres.....	\$12 00
Hire of eight men and boys.....	37 00
Seed corn.....	8 00
Cost of Silo.....	47 00

\$104 00

I opened the pit on the 16th of November and found the fodder in good condition. From the beginning the cows ate it with relish, leaving good hay or corn fodder in preference for it. The ensilage had settled about eighteen inches. I had about eighty tons in the pit at a cost of \$1.30 per ton (including the cost of the Silo). It is safe to say that this year I shall be able to put in 100 tons (the capacity of the

Silo) at a cost of not more than seventy-five cents per ton. I have fed the ensilage since November to twenty head of cattle, giving each forty pounds a day, with two quarts of bran. The cattle have improved in every way, the flow of milk being much better, and their general appearances indicating perfect health. Each head has had ten pounds of hay per day. I shall have enough ensilage to last until the middle of April. I am quite sure I can feed at least one-third more cattle on my farm with ensilage, than with dry corn fodder and hay, and have them in better condition in the spring. There can be no failure in the preparation of ensilage, a little care and attention at first being all that is necessary. When once the weight is on all the trouble ends. The expulsion of air is the secret of success. The Silo must be perfectly air-tight. My advice to the farmers of Berks county is that every one of them build a Silo, and they never will regret it.—*Ex.*

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#### THE FARMER'S BANK THE BEST BANK.

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We have been repeatedly assured that farming don't pay, and the boys have believed the assertion and have gone to clerking, or teaching, or trading—"business" they call it. But recently the books have been opened—the books in which the accounts of the occupations are kept and being footed, we see what pays and what is unprofitable. Bankers, supposed to be a sort of nobility, have smashed; many of their clerks have proved to be great rascals; railroad obligations have gone to protest; factories have stopped to liquidate, and crowds of the richest and grandest of mortals, shuffling millions of dollars, often in a day, have shrunk down to be quite common. How is it with the farmer? Has the panic touched him? Does he lie awake thinking of the hard times? Not much! It is true that if he owes more than he is able to pay, or if he has bought more land than he can work, he is in trouble, and something must be sacrificed; but this dilemma was bound to appear, panic or no panic. Most farmers are out of debt, or they owe so little that they can see their way clear, and the sun rises and sets as aforetime; the cows give milk, the butter comes, hens lay eggs, hogs fatten, and the country grist-mill runs just as if Jay Cooke had never smashed and his satellites with him. The truth is, farming is an institution founded on such a solid financial basis that it can never break. The farm is not only a bank, it is a mint, making its own money, which is worth just as much for the use of mankind as it was 2,000 years ago, and as it will be worth 2,000 years from to-day, and although this money



is not exactly the same as greenbacks and specie, it is better, for it underlies all others, and goes before them, and makes all other things that are worth much under the stars, possible.

And yet we have been hearing all along that this institution of the farm does not pay.

Bless you, in the long run there is nothing else that does pay. Let a man "travel this world all over," like Rosin the Bow; try everything, be everything, he will come at last to see that the surest thing is a farm well stocked and tilled, and that there is no warmer place on earth than by the farmer's kitchen fire.—*Practical Farmer*.

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### SEED WHEAT.

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*Editor Massachusetts Ploughman :*

In the *Ploughman* of December 31st, 1881, you have an article on "Selection of Seed Wheat," credited to the *Rural New Yorker*. It advises seed plots say of one-third of an acre each, the grain to be planted a foot apart or less, to be cultivated in the fall and again in the spring, the object being to raise the finest wheat grains possible for seed.

A very successful experiment which I was induced to make some twenty years ago from reading of some made in England and reported in "Coleman's European Agriculture," may confirm the thought as to what could be done in this way. I put in one-fourth of an acre and did it as follows: I made a wooden wheel as for a wheelbarrow, and put in a peg every six inches in it, run so as to make a hole one inch deep. Rolling this along a line I had a hole every six inches, one inch deep. Moving my line nine inches and rolling again, with a seed in each hole, I had my grain sowed 6 by 9 inches. I did not work it. It tillered like orchard grass, grew as tufty, and made from 40 to 60 heads for each seed. Dropping the seed was very tedious work. My children did it and got very tired of it before it was finished.

If a machine can be made to dibble a hole one inch deep and put one seed in it, the whole could be easily pressed by any roller after examination as to correctness of the work. When this is done the sowing of seed and the yield would be such as no man has thought out.

Leibig used to say that the worst enemy a grain of wheat had was another grain too near it. It could cost no inventor much to think of this want. Pegs on a cylinder will make the holes with perfect accuracy. One seed for each hole is the only want to cause a new departure in wheat growing.

Respectfully,

Ashville, North Carolina.

LEWIS W. HATCH.

### STRAWBERRY BORDERING.

We have been out of conceit of a little square garden patch paled in, for a good many years. Though when we used such a garden laid off in four squares, and spaded it in the early spring because it did not pay to put a plow in, we always bordered the plants with moss pinks, flowers or strawberries, for family use. A plat thus enclosed, sixty-four feet each way, gave us beds three feet wide and two hundred and fifty-six feet long around the fence, nearly. On one occasion we procured slabs from the saw mill and bored two-inch holes in them fifteen inches apart and laid them round side up on the edge of these beds and set a strawberry plant in each hole in August. Such a profusion of strawberries as we had from each of five experimental varieties, was a sight worth beholding. When other strawberries in the neighborhood were all dried up by the great drought of that season, ours were in perfection. A half pint or more were taken at a time from each plant. It was but little trouble to keep the runners down. But the next season the plants crowded in the hole so closely that the crop was a failure. We removed the slabs in August of the next year and set plants fifteen inches apart as a hedge border. This border was the admiration of beholders from early spring until after fruiting, and the yield was fine.

Now with an oblong garden with rows twenty rods long we do this same work with a horse instead of a shovel, growing our family tomatoes around the fence in the beds and our strawberries as bordering, with no loss of space.

We prefer preparing the ground so as to destroy the weeds during June, July and August. We have then but little trouble with the weeds during the autumn, while a good growth is secured and a full half a crop next season with no labor in the spring.

If the border is set with potted plants as good a crop may be secured next season, or even better, than though the same plants were allowed to stand where the runners took root.

All our readers may not know how this is done. Get a quantity of three-inch flower pots and fill them with good, rich soil; sink them in your old bed even with the ground; put the young plant that puts out on the runner over this sunk spot, and pin it down with a hook made from a forked twig. It will soon form a strong plant, which if left to stand, would bear a crop the next year. After it is thoroughly rooted, separate, which will be in two or three weeks, cut the runner and make the new plant independent. Wet the soil in the pot thoroughly, and transfer it with roots undisturbed to the watered hole in your well-pre-

pared border, and cover with dry soil, taking care not to cover the crown of the young plant. It will not suffer from the removal. Plants thus set and mulched to protect them from too severe cold, will produce a fine crop next season. Try it on a small scale, and you will be convinced that there is no need of waiting two years for a crop of family strawberries. Such a border is ornamental and profitable.—*Practical Farmer.*

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### HAMPSHIREDOWN SHEEP.

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#### *Editor Southern Planter :*

There has been, as you know, a considerable English immigration into Albemarle, and a dozen or more families into Augusta, since the war. Under the shadow of that pretty conical-shaped hill, that marks to your eye the locality of the village of Barterbrook, as Betsy Bell does that of Staunton, there settled a few years ago a most intelligent and refined gentleman, W. D. Horsley. After being there long enough to make hosts of friends, his government, shewing the same appreciation of him, sent him back to India in the civil service, and the argument used has always been *potent*, a doubling of his salary. His representative in charge of what is known the Valley as part of the Jno. Brooks farm, two miles south of Fishersville, on the C. & O. R. R., is Mr. O. W. Wilkinson, a genial, popular young Englishman. I do not know under what circumstances he conceived the idea of returning to England and making a selection, as he has recently done, of twenty fourteen-months old Hampshiredown bucks, averaging 200 pounds, from the *best* flocks in that country. He took them from the car at Fishersville on Thursday evening, the 15th, in tip-top condition, and saved \$7 per head insurance to New York; a lot of five, of same quality, age, &c., the purchaser carried to Rio Janeiro—paid \$35 per head insurance. Mr. Lowell gave him a permit to carry them into New York duty free. They are a lot of beauties, and Mr. Wilkinson is exceedingly desirous that his Augusta neighbors, largely in the sheep business, should become the owners of the choice of this flock. I much fear they will not be equal to the occasion. Mr. Wilkinson told me the butchers are smart enough in England to send their mutton of this variety to market with their heads and feet, and thereby insured the highest price. Mr. Editor, I am safe in saying that this is the *first* important importation of this fine sheep into the Valley, I think the first in Virginia, and next to Mr. Merriman, of Cockeysville, Md., am not sure if before or after the war, perhaps the second in the United States. Mr. Wilkinson has written himself up a public benefactor.



He ought to be repaid by liberal sales. He brought over a male and two female ferrets, and one of them ashipboard added four to the number; also two spaniels—retrievers—low, chubby, with curly, silken hair, and three golden bantams—a pretty little chicken—more ornamental than useful; also a lot of full-blooded Bramah chickens. For a friend in Staunton several haw-thorn sticks, from one of the hedges, to make canes, and are as hard as iron and polish like mahogany. He remembered a particular friend with enough of a light colored cloth for pants and vest, the duty on which, well I won't say, that he can hand down as an heirloom, well, to the fourth or fifth generation, each washing and wearing it, unless one of them should be equal to Senator Davis in size, or Dixon H. Lewis, of Alabama, who would eclipse Mr. Davis, and whom we remember forty years ago to have seen climbing the steps at the west portico of the Capitol, and whose thighs would approximate the biggest inverted churns.

*June 19th, 1882.*

J. MARSHALL McCUE.

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#### THE USE OF PLASTER.

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Plaster is an invaluable fertilizer. There is no doubt of this, and for some crops and upon some soil it acts with marvelous effect. For clover, peas, corn, oats and grass it often produces such effects that one is puzzled to account for it. Whether it is the lime or the sulphuric acid, or the gypsum itself, has not yet been satisfactorily shown. It is known that crystals of gypsum are in the sap of clover and some other plants, but whether these are normally present or accidentally so, from a redundancy of the elements of sulphate of lime, which have entered into combination in the juices of the plants, has not yet been explained. Mr. George Geddes, the well known farmer of Western New York, has kept a part of his farm which is too distant from the barn to draw manure there profitably, in a state of high fertility by the regular use of plaster upon clover, and the plowing in of clover sod for a wheat crop. Some soils, however, refuse to respond to an application of plaster, but these cases are exceptional, and in general, plaster is very beneficial. Its best use, probably, is as a deodorizer in stables to take up the ammonia so freely formed there by the decomposition of the urine, and change it to inodorous sulphate of ammonia, which is retained in the manure to the considerable enrichment of the latter. The plaster not only then serves a useful purpose in the stable, but it goes into the soil with the manure in a state of combination in which it may do more good than if applied alone and in its raw state.—*Orange County Farmer N. Y.*

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### FEEDING HORSES BY CLOCK WORK.

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Nearly two years ago, as I had agreed to feed the horse of a relative at five o'clock, A. M., so that the animal would be ready for service at half-past six o'clock, and as the stable was located at a distance of half a mile from my residence, I constructed a rude but efficient device to aid in feeding the horse precisely at five o'clock every morning without the presence of any person (not patented nor patentable). At one side of the stall I hung a lid with hinges over the top of the small feed manger. One end of the lid extended about a foot into the feed room. To make the end of the lid in the feed room heavy enough to go down and thus open the manger, a piece of iron was attached to the end of the lid, making that end in the feed room about one pound heavier than the part of the lid that covered the manger. An alarm clock was then placed in a cupboard, fastened to the side of the wall in the feed room, and a half inch hole was bored up through the bottom of the cupboard and through the bottom of the clock case, directly beneath the large wheel of the alarm gearing. Then a small wire, about as large as a coarse horse hair, was attached to the heavier end of the lid to the manger, while a long loop was made at the other end of the wire. At evening I fed the horse his evening meal in his proper manger, and putting the mess for morning in the other manger, the looped end of the wire was put up through the hole in the bottom of the clock case, and the loop was hooked on one of the teeth or cogs of the large wheel. The wire was made just long enough to hold up the heavier end of the lid in horizontal position, thus closing the manger. The moment the alarm-wheels started, at five o'clock, the wire loop slipped off the cog and the lid of the manger opened and stood erect, so that the horse could eat. The rude device never failed to open the lid precisely at the appointed hour. I could feed the horse with absolute certainty, at any other hour, though I were two hundred miles away from the stable. One clock would open half a dozen lids as well as one.

SERENO EDWARDS TODD, SR., in *The Husbandman*.

*Orange, Essex county, N. J.*

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ON heavy loams or clay, clover roots penetrate the subsoil and open it to the fertilizing influences of air and light. It is rich, too, in nitrogen, and in the decay of its leaves and roots it gives the soil just what is wanted to grow a maximum crop of any kind of grain.

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UNCLE REMUS'S QUEER VISION.

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It was not every night that the little boy who formed Uncle Remus's unanimously appreciative audience could prevail on the old man to tell him such animal stories as were current among the negroes on the plantations during the days of slavery. There was one season, for instance, when Uncle Remus was troubled with the toothache, and he not only refused to tell any stories, but he was cross and impatient besides. He had periods of toothache and impatience, and periods of toothache and remorse. One morning he said to the little boy:

"You nee'nter min' me, honey, w'en you year me rippin' en snortin' roun' yer, kaze a man wid dese yer kinder gallopin's en gwines on in his mouf 'bleedg ter tromple on somebody feelin's. Seem like ef I had dish yer ole toof some'rs whar I could draw back en fetch it a joe-darter, en den take'n stomp it in de groun', en mash it' twix' a couple er rocks, I mout sorter git vinger'd on it; but, bless yo soul, honey, hit's one er dem ar kinder creeturs w'at you can't strak back. Stidder dat, you got ter set down en nuss it up, en stan' by it, same ez ef you done bin tuck wid a liken' un it. But I'm gwine up ter-day," continued Uncle Remus, with a sigh, "en hunt fer de man w'at kin kyo de toofache wid col' iun, en I speck ef you'll drap in on me atter supper maybe you won't fin' me so up-en-ready fer ter 'spute 'long wid you. Dish yer jaw bin er huttin' me owdashus, mon."

"When papa has the toothache," said the little boy, sympathetically, "he goes and has it pulled out."

"Dat's so, honey," responded Uncle Remus, with a groan; "but Mars' John Young, en mo' dan dat, he got mo' strenk in his neck dan w'at I is."

The old man put on his coat, seized his huge walking-cane, and went off, and the little boy saw him no more until night, when as was his custom, he made an informal call at the cabin. The door was open, a fire was blazing upon the spacious hearth and the old man was in such good-humor that the child fully expected to hear something further about the curious adventures of Brother Rabbit and Brother Fox. All the indications pointed in that direction; but just as Uncle Remus seemed to be ready to accommodate the youngster, Aunt Tempy, a large, fat, motherly-looking negroe woman, walked in the door. Aunt Tempy was the milker, and her position gave her almost as much authority on the place as that supposed to be vested in Uncle Remus. She wore a flaming red and yellow head-kerchief, and she had a habit of shutting



her eyes and holding her head on one side when she talked, which by some curious process gave unusual emphasis to what she said. Aunt Tempy and Uncle Remus were in the habit of treating each other with the respectful indifference of rivals who are secretly jealous of each others influence and authority, but who have too much tact to quarrel. The visit of Aunt Tempy was a concession calculated to disturb Uncle Remus's plan of defense, but her dogmatic manner was an assurance that no concession was intended. She scorned to knock at the open door, but stalked in and seated herself upon a wooden bench without, waiting for an invitation, and with a marked air of proprietorship. When she spoke her voice was elevated to a pitch not at all calculated to conciliate.

"I year talk er yo' troubles, Brer Remus, un I say ter myse'fs'I, I'll up 'n take some er dish yer truck ter ol' sufferin' sinner, un I holler out ter Sol, s'I, ' You Sol!' s'I, come yer dis instance,' s'I, 'un git me down dat bag er sage, un dat red-oak bark,' s'I, ' un I'll take 'n mix up a poultice what 'll mighty nigh kiver yo' unk Remus jaw,' s'I, kaze I'm a 'oman dispose ter live neighbors,' s'I; un Sol he lipt out, he did, un fotch um, un dar dey is."

Aunt Tempy held in her hand what appeared to be a steaming bag of mush, which she deposited on the floor as she spoke, and then sat and looked at Uncle Remus with that resigned air which, the world over, is one of the most disheartening accompaniments of human sympathy. But there was a touch of delightful humor—delightful by comparison—in the utter and arrant deceit which Uncle Remus summoned to his aid—deceit which found queer expression in tone and word and features.

"Goodness knows, I much 'blige, Sis Tempy," he exclaimed, with effusiveness. "Mighty few 'omans dese days 'ud er tuck de trouble fer ter rack 'roun' en fix up plarsters fer po' ol' sick nigger like me, en wid der head full er yuther bizness at dat. I'm 'blige ter you, Sis Tempy, goodness knows I is."

"Well, I des tell yo' how I is, Brer Remus," said Aunt Tempy, closing her eyes and folding her fat hands across her capacious stomach "I des tell yo' how I is: w'en I year talk er folks wid pains, I des nat'ally follers um wid my min', kaze w'en yo' come ter call um by name, dey ain't skacely no pains gwine w'at I ain't had um some'rs fust un last. Un ef you'll des sen' up ter Miss Sally, un make 'er drap some lodlum 'round' on de aidges er dish yer poultice, I lay it 'll kyo yo' jaw. Leas'ways, hit allers kyo'd mine. Dat's de kinder 'oman I is, Brer Remus. Yo'ain't ketch me lookin' one way un hollerin' de udder, dat yo' ain't."

"I ain't 'sputin' dat, Sis Tempy," replied Uncle Remus, "en I ain't 'sputin' but what dat ar plarster would er rebuke dish yer jaw er mine, en dough yo' come too late, it look so nice I'm a great min' ter slap it on de side er my head en go ter bed wid it anyhow, spite er all dat mout be said er done. But my toof done bin kyo'd."

"Tooby sho! Well, I ain't year de beat er dat! How yo' bin kyo' toof, Brer Remus?"

"I des tuck'n brace up' en sail myse'f' 'roun' ter de man w'at handle de tongs, en dat de las' w'at dat toof bodder me."

"Des lissen at dat!" exclaimed Aunt Tempy, with increased unction. "Is yo' git er tuck out, Brer Remus? Manys un manys de time w'at my jaw fairly rankle in my head, un yit I ain't had de nervesness fer ter git no toof drug out."

"Well, den, Sis Tempy," said Uncle Remus, solemnly, "I hope de lord 'ill stan' 'twix you en dish yer pullin' bizness."

Ah, yi!" exclaimed Aunt Tempy, in a tone that might be called the exultation of curiosity.

"I put on my coat dis mawnin', en I tuck up my cane"—here Uncle Remus paused, and looked at the little boy with the well-feigned expression of one endeavoring to recall a half-forgotten event. "Is I say dis mawnin', honey? Kaze it looked like ter me w'ich it mout er bin las' year, or de yerr 'fo' dat. W'en a man," continued Uncle Remus, reflectively, "done git do sperience w'at I got, en mo' speshually w'en he git it all up in a bunch, den it look like it 'bleedg ter bulge some'rs."

"Umph! Troof, too," Aunt Tempy assented, with enthusiasm.

"But dat ain't neeber hyer ner dar," Uncle Remus went on. "I went arter de man, en I fin' 'im en I tell 'im 'bout de jaw. He mighty nice-lookin' man, dat he wuz, en he tuck'n sot me down in a cheer, he did, en den he grope 'roun' in my mouf wid a leetle iun stick twel he feel me flinch, en den he stop en say, 'Dar she is!' Eh sho nuff, dar she wuz."

"He fin'de right toof!" exclaimed Aunt Tempy, with unconcealed admiration.

"Yesser," said Uncle Remus; he drap on it terreckly; en w'en he done drap on it, he tuck'n clamp my head back in de cheer, he did, en den he draw long breff, en 'low he wuz ready fer bizness. De cheer w'at he sot me down in," continued the old man, using his cane to draw a war map of the situation in the ashes on the hearth, "wuz 'bout like 'tw'er' yer, en frontin' un it wuz a winder, en cross de street fum de winder wuz a big two-story house, settin' dar des ez natchel ez you

please; en w'en de sun shine on dat house, it look w'ite ez snow. De man he stan' yer ter de right er de cheer, en w'iles he was projickin' longer, I keep my eyeball sot on de house. Bimeby de man look like he git good en ready, en den he tuck dem tongs er his'n en feel 'roun' twel he clamp down on de toof; and den he tuck 'n brace hisself en r'ar back. Bless yo' soul w'en he r'ar back, de big two-story house tuck'n fly up in de a'r, en fall back on de groun'—*kerblip !*"—JOEL. C. HARRIS, in EDITOR'S DRAWER,—*Har-per's Magazine for July*.

### STIR THE SOIL.

Farmers are realizing more than ever the importance of constant and persistent stirring of the soil. The effect of this vigorous treatment is twofold. The land is put in better condition for tillage, and the weeds and other enemies of the crops are exterminated. With the improved plows, harrows and cultivators within the reach of every enterprising farmer, this thorough treatment of the soil entails no great additional amount of labor. By the old methods of farming everything seemed to be done the hardest way. The result was that the weeds and bugs were often victorious even when the best efforts were directed against them. What is true in the tilling of the soil is also true in the culture of the mind. When schoolhouses were few and far apart; when books were scarce and expensive; when newspapers were weak and without influence, improvement was the fruit of great energy with inferior facilities. That constant stirring of the mind on which mental growth so much depends was almost impracticable. The implements for intellectual culture, books, newspapers and periodicals have kept pace in their improvement with the implements of agriculture; and now he is indeed a sluggard who allows his mind to run to weeds, or become hardened and unproductive, when the facilities for cultivation are so abundant and accessible. Stir the soil and mind constantly with the best implements to be obtained, to make the harvest time a full success.—*Western Plowman*.

**TO HAVE FINE RADISHES.** Farmers Advance: If you want to have fine radishes, don't pile on a lot of coarse stable manure, but go to your old chip pile—clear off the unrotted chips on top, and then put a wagon load or more of the soft rich soil made by the well rotted chips, on your radish bed. A very little sprinkle of ashes may help it. Plant the radish seed in this, pressing the soil firmly around it, and when the radishes begin to grow, keep the soil well stirred and all weeds killed. If the weather gets very dry, water once lavishly. Remember, you must apply water in very large quantities or you had better not put on any at all.



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**BILL ARP ON THE AGRICULTURAL SITUATION IN THE SOUTH, IN  
THE "ATLANTA CONSTITUTION."**

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Just now the country is most glorious. You city people ought to shut up your doors and come out and see the smiling land, and luxuriate in beauty and innocence and peace. A sure and beautiful harvest is in sight everywhere, and the farmers are about to be redeemed. Nature is in her teens just now—a blushing maiden wearing pantalets and preparing to bang her flaxen hair. How's that for high? If I was a poet, I would sit in my piazzer this lovely evening and breathe a poem or an ode or an idle or a pastoral song, and say:

How sweet the sunlight rests upon the land!  
The woods are happy in their summer clothes;  
The waving grain, by gentle breezes fanned,  
Gives token of good picking for the crows.  
The fields are proud and "feeling of their oats,"  
Or boast of being "just as good as wheat;"  
The jay-bird sings his adamantine notes,  
And kine with swelling fat stick out a feet.

Jesso. I feel the poetic inspiration aboard, but somehow my rhymes have to be powerfully strained. This, I suppose, is the fault of our language, though possibly it may be mine, for there are a power of folks who swell up and gush, but are not poets. Maybe that blank verse is my forte in the spring of the year, for they say it is a higher type of rhapsody and is more æsthetic. Blank verse don't jingle like a jewsharp, but it elevates a man to more ethereal regions. Blank verse has not long meter or short meter, or 8s, 7s and 4s, but just meters all along the line, whether its long or short, like the choir sings in the Episcopal Church, and can trot, or pace, or gallop through a sentence and make the tune to fit it, meter or no meter. Still I don't think old people ought to try and write poetry, for they can't get up sufficient gush. Age knocks the poetry out of a man just like marriage knocks the music and romance out of a woman. She quits playing the piano in about two years and takes to the sewing machine. She quits singing and goes to cluckin' and scratchin' around. I don't like that. It always makes me sad to see an anxious, care-worn mother, and it would seem like enough to scare off her own girls from marryin', but somehow it don't. The longer a man can keep up his boyish feelings and hilarity and play hoss with his little boys, and the longer a woman can laugh and frolic and picnic and romp with her children, the better for 'em. When Mrs. Arp condescends to put on her long-eared sun-bonnet and go down with me and the children to the dewberry patch, I am happy, ticks or no ticks. That's an event,

that is. Dewberries are ripe now, and we eat 'em with sugar and sure enough cream and make pies out of 'em, and if sugar was cheap or easy to get, we would all be happy. No family of size and appetite like mine ought to go through the berry season without a barrel—for there are blackberries and huckleberries and raspberries and cherries for tarts, and peaches and apples for dumplings, and everything for jelly and preserves, and a dollar's worth of sugar at a time is just an aggravation. Mrs. Arp said yesterday she had "rather be stinted in anything than sugar"—"and coffee"—said I. "Well, yes," said she, "I can't do without coffee." "And plenty of butter," said I. "Yes, and good butter," said she; "and good flour," said I, "and lard and nice clothes, and number two shoes, and so on and so forth and so on, all of which ends in wanting plenty of money." Jesso.

The clover is blooming high this year, and looks too lovely to cut down, but such is life and the end of all things.

Time cuts down all,  
Both great and small.

Old Father Time used to go about in summer clothes, with nothing on but his bones and a scythe-blade in his hand, but now we can cut down ten acres to his one with a buckeye reaper. They ought to get up a new picture of the old fellow sitting on a machine driving a pair of Kentucky mules in a wheat field at harvest time. There are a heap of the good old primer and spelling-book pictures going out of date. Nobody ever uses an hour-glass now. Nobody ever sees an old-fashioned bee-hive with a round top and made of straw. The old farming pictures look curious to this generation—the humpbacked man cutting his wheat with a crooked sickle, holding a bunch in one hand and cutting it with the other. And there was two men a ploughing—one was driving the steer and the other holding the plow, and that's where Ben Franklin got his maxim:

"He that by the plow would thrive,  
Himself must either hold or drive."

But now one man will sit upon a cultivator or pulverizer and do ten times the work in a day. I don't see how them old-time fellers did make a living, for with all our improvements it is nip and tuck to get along and keep even. But some of these old spellin'-book pictures stick fast and don't degenerate a bit. That rude boy still climbs the apple tree, old dog Tray still gets into bad company, the bull gores the ox and the milkmaid has vain expectations and turns over the bucket just like they did in the olden times. We can mend up our machinery and invent new ones, but our old habits and traits of character remain

about the same. I don't know that our people are any happier than they were 4,000 years ago, and the same old truth prevails. Man that is born of a woman, and there are no other sort that I know of, is of a few days and full of trouble.

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### COMMON ROADS.

[For the Southern Planter.]

The elements of national prosperity are numerous and varied. The patriot, the statesman, and especially the farmer, should be wide awake, fruitful in invention, and be ready to adopt and utilize what gives promise of being valuable.

Railroads, besides being one of the grandest achievements of modern civilization, and one of the most potent instruments of general wealth, have been of incalculable advantage to agriculture. They are not, however, more valuable, nor more important, than common roads. One of the first consequences of a "new settlement," sometimes an antecedent, is a road. "Blazed trees," to mark the course, are succeeded by a highway. The foot-path or bridle-path is enlarged into the wagon road. As population and wealth increase, the rude appliances give way to more substantial structures. The civilization of a people may be approximately determined by the character and condition of the roads.

The value of good roads and the importance of keeping them in good condition can hardly be over-estimated. They are made to reduce the tractive force to the least possible limit, so as to make travel and traffic easy and inexpensive. "The *tractive* force is the power required to move a vehicle and load on a horizontal road." If steep grades, holes, ruts, unevenness, etc., increase the tractive force, then the travel must be slower and the load drawn must be lighter. As you approach the horizontal and improve the hardness and smoothness of the road-bed, speed and the load can be increased. A distinguished engineer says: "It may be remarked, by way of comparison, that if fifty horses are just sufficient to conduct a given traffic upon a given length of a very dry and smooth broken-stone road, it will require 71 horses to conduct the same traffic upon an equal length of the same road in a moist or dusty condition; 112 horses if the road be covered with dust and mud; while upon the same length of solid earthen cause-way covered with gravel one and one-half inches thick, 240 horses would be necessary to accomplish the same work."

A volume would not suffice to treat of the healthful influence of this creative agency upon production, travel, revenue, wealth, comfort.



We complain of an oppressive and iniquitous protective tariff, of the heavy exactions of internal revenue, of burdensome city levies, and never tire of jeremiads on "bloated bondholders," and yet cost of transportation is the heaviest tax our people pay. It is a tax on industry, on labor, on capital, on production, on exchange, on consumption.

The wealth of a State, as of a person, consists in excess of production over consumption. Everything that increases the quantity of commodities obtained in exchange for any result of industry, encourages production and increases wealth. Speaking after the manner of the science of wealth, a product is anything got ready for sale, and for the purposes of this paper, we limit to material things got ready for sale. It seems too obvious for argument that what interferes with legitimate production hinders the accumulation of wealth, and what facilitates production increases wealth. Products may be numerous and prospectively valuable, but without immediate value or price, because they are not where they can be sold. To give marketable value, buyer and seller must be brought together. What restricts the delivery of commodities, or makes delivery as to time or quantity uncertain, puts restriction upon sale and therefore upon value or price. If the buyer and seller be put into communication, and the commodity be readily and cheaply deliverable, then some of the most serious impediments to trade are removed.

A farmer grows and gathers crops and prepares for market, but the market has to be sought. Miles intervene between the producer and the buyer. The cost of getting the crop to market has to be paid by the farmer, and is to that extent a diminution of profits and a tax on production. If the cost of getting to market equal the cost of raising, then that crop must be abandoned. If remoteness from buyer and the cost of transportation be so great as that no profit can be derived from producing, then the land will have no marketable value. Good roads and cheapness of transportation will enhance the value of land and make farming profitable. Remote neighborhoods are brought together, trade and friendship are stimulated, and the country prices bear a due relation to town prices. A market is created for surplus produce, value is imparted by creating a demand, and the better and less costly the transportation the larger is the sphere of demand.

This matter of common roads needs increased and continuous attention. To it the country should give thought and labor and money. Improved roads, with mile posts and sign-boards, would be wise economy. Each county should have an engineer, with term of office sufficiently long to protect from popular caprice and prejudice, and with

compensation sufficient to ensure competency. His duties should be to superintend the construction of new roads and the maintenance and repair of old ones. There should be some system in opening and in working. The present method of working is execrable. Travel and traffic are subordinated to whim, laziness and stinginess. It is true economy to build a good road and keep it in repair. In some countries men are permanently employed to work on roads. Our "jail birds" might be organized into effective road-hands instead of growing fat and vicious at public expense. Substantial work is better and cheaper than patch-work. I have crossed bridges built a thousand years ago and traveled on roads that are contemporaneous with the Cæsars. I have seen a dog, aided by a woman, drawing as great a load as a mule could pull over some of our country roads. I ventured once to say to a Governor of a great State, who asked my opinion as to a message he was about to write, that if it were my duty to prepare such a paper, instead of a long dissertation on Federal relations, or a discussion of obsolete issues, I should urge upon the Legislature the need and the economy of good country roads.

A VIRGINIAN.

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### PEP-PREE-E-E-POT.

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AN OLD EX SLAVE'S BUSINESS IN PHILADELPHIA—HOW SHE MET HER OLD MISTRESS IN DISTRESS.

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#### A Romance of the Street.

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The glare of a bright red light, now appearing suddenly and as swiftly passing away, caught the eye of a *Press* reporter, whose duties had called him late one Saturday night to the extreme northern end of Eighth street. While the pedestrian was wondering whether the light he observed was the gleam of a dark lantern or the glowing charcoals in the furnace of one of the innumerable hot sausage venders who infest the streets of the city, a peculiar cry, the like of which he had never heard before, pierced the inky darkness above and smote upon his ear like the weird cry of some forlorn night bird. The cry was:

"Pep-pre-e-e-pot!" "Pep-pre-e-e-pot!"

The first syllable of the unintelligible word or phrase was uttered in a tone that might have proceeded from the mouth of some stalwart horn-blower. The elevation of tone necessary to emit the second syllable of the cry was tremendous. However, to the mysterious voice octaves seemed to be but mere playthings, and with vocal stride it ap-

peared to span with ease the whole gamut from the lowest to the highest note. After holding that marvellous "pree-e-e" in a piping tremolo for what seemed an interminable length of time, the voice suddenly descended upon the last syllable, cutting it off short with a sound like the cracking of a whip.

Approaching the spot whence the glare and the cry proceeded, the reporter found himself in the presence of one of Philadelphia's peculiar institutions. A long cylindrical can, beneath which was a glowing charcoal fire, and from the edges of whose lid rolled clouds of savory steam—this was all that at first could be observed. But presently in the darkness behind the can appeared the outlines of a buxom colored woman, black as ebony, and with a countenance expressive of a kindly feeling.

"What have you got there, aunty?" asked the reporter, indicating with a gesture the can suspended from her stalwart shoulders.

"Pep-pree-e-e-pot!" screamed the African, without the least abatement of tone or intensity of sound.

"Hab some, sah?" she continued in an ordinary tone of voice. "It's berry good."

The scribe assented, and the woman proceeded to ladle out a bowlful of the black-looking mixture.

"Yo' can't get no peppery-pot like dis in all Philadelphy," continued the black vender of the blacker soup, as she gave her ladle a last shake against the edge of the bowl. "Dis' cre am made 'cordin to my own recep which I larned befo' de wah, way down in Alabam'. Some folks say all you has to do is to cut up some tripe and peppers and weg'tables an throw 'em in a pot with a little water to boil, but I knows better'n dat, an' I wudn't tell my rescripshun for no amount of money."

By this time the intrepid adventurer had half emptied the bowl of pepper pot; finding it to be really savory and enjoyable, using a battered pewter spoon in the operation of transferring the mixture from the dish to his mouth. Returning the bowl to its garrulous owner, inquiry was made: "How did you learn the recipe 'down in Alabama?" I thought they didn't know how to make pepper pot in the South."

"Oh, yes dey do," returned the colored woman, "dey knows more down dere in a minit dan you folks do in a week. Why, when I was a slave down at ole Massa Gibson's plantation, I used to know mo' about cooking an' sweeping an' nussing dan de whole ruck of cullud trash dat libbed up No'th. Dem was de good ole days, an' I nebber 'spect to be so happy no mo' in all my life. To think dat I shud live to see de little gal dat I used to nuss a-wand-ring about on dese



busy streets wid'out 'nough money to buy a loaf of bread for herself an' my ole massa, why it makes me wish I'd nebber been born." There were tears in the eyes of the kind-hearted old woman as she finished her exclamation, and, suppressing what sounded very much like a sob, she relapsed into silence. Her customer, however, encouraged her to continue the conversation, and obtained quite an interesting account of the reverses of fortune which befell a Southern gentleman and his daughter, and the curious meeting of the latter with their former slave in the streets of this city.

The old colored woman's name is Julia Gibson. "'Mint Julep,' as the boys call me," said she, in relating the story. She was formerly a slave on the large plantation of Maurice Gibson, near Mobile, Alabama. The latter was a typical Southerner, and during the war he was extremely open and violent in his denunciations of Northern men and methods. The strain and nervous excitement consequent upon the rumors of threatened invasions by Federal troops proved too much for the gentle nature of Mr. Gibson's wife, and she died, leaving their child Alice, then but five years old, to the motherly care of the slave Julia, who had been the little one's nurse since its birth. Before she died, Mrs. Gibson placed around the child's neck a little locket, which afterwards enabled her old nurse to identify her. Towards the close of the war Mr. Gibson's plantation and effects were confiscated, and he himself was removed with other Southern prisoners to the North, his child Alice being permitted to accompany him. The latter, however, was separated from her faithful nurse Julia, leaving her almost heartbroken, and for years they never knew what became of each other. Finally, however, Julia and her husband drifted northward, in company with so many others of their race, and eventually settled in this city, renting a little house on the upper end of Mervine street, where they now reside. The couple have managed by thrift and economy to store away a considerable sum of money, and are now in comfortable circumstances.

Julia began the sale of "pepper pot" in winter and "hot corn" in summer several years ago, and has made her business quite successful.

"About three years ago," continued the old nurse, after having related the above facts, "I was walkin' down Broad street late one cold winter night, an' comin' near a lamppost I seed a young wimin dressed berry thin, a-leanin' an' shiverin' agin the cold iron. I just tho't her was one of them wimin what you see on de straats at night, but somethin' in her face made me go up an' speak to her. She tole me she was nigh about famished, an' her father was lyin' at home almost a-dyin'. I guv her a bowl of soup and was a-watchin' her eat it an' wonderin'

where I had seen her befo' when a bluster of wind tore away the fast-nin' of her shawl an' I seen de little gole locket dat my Alice wore when she went away to 'de Norf. Den I dropped my can all in a heap, an' grabbin' hole ob de chile's arm, I say, all shaky-like, 'Missee Alice, doan't yo' know me? Doan't yo' know ole Jule?' Wid dat de gal fell back, and would hab gone to the ground, but I cot her an' took her up in my arms like a baby. De poor chile cried an' cried, an' I tot she would nebber git thu kissin' me, but I comfort'd her, an' finally went wid her to de little room where her father, my ole massa, was a lyin' nigh about sick to death. I did what I could for him meself, an' den went for my ole man. We got him a doctor, an' I nussed him through his sickness, an' he is alive an' well to-day. My chile Alice is married now, an' libs ober in West Philadelphia, where I offen go over to see her.

"Well, I mus go on or I won't hab no more cust'mers to-night. Deres de right change. Good-bye, an' Lor' bress yo'!"

The old woman moved off slowly down the street, her charcoal fire gleaming brightly through the darkness as her stout body swayed from side to side, and ever and anon the midnight stillness of the thoroughfare was broken by the shrill cry of "Pep-pree-e-e-pot! Pep-pree-e-e-pot!"—*Philadelphia Press*.

[We have not space for stories of any kind, if, indeed, they are ever admissible in a purely agricultural paper, but the one above is so *typical* of the fidelity and family attachments which characterized the slaves of the South, we feel compelled to copy it in justice, as well to the slaves as their owners.

We could add many testimonials in our own experience of the fidelity and love of the slave, since his freedom, to his or her master and family, and of the reciprocal feeling between the races.—Ed. S. P.]

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DRAINS should be cleared of waste matters, such as leaves and other trash that will interfere with the flow of water. In digging open drains the earth should be thrown out upon the side opposite to that from which the surface water comes. In all the provisions made for carrying off surface water, the following principal points should be looked to, viz: give the water the easiest possible channel; keep it in many small streams; avoid anything that will prevent easy escape of the water from the channels; provide an outlet into a stream or pond, or take care that it escapes where it will do no damage.

If a good face is a letter of recommendation, a good heart is a letter of credit.—*Bulwer-Lytton*.



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### COTTON-SEED MEAL AND CORN MEAL.

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Prof. G. C. Caldwell, of Cornell University, in a paper on the relative merits of cotton-seed and corn as food for stock, says, "Cotton-seed meal is hardly to be compared to corn meal as food for stock, as the two differ so widely in composition. The former contains over five times as much protein or albuminoids and nearly six times as much fat as the latter, while the corn meal contains nearly four times as much starch and other nitrogen-free extractive matter as is found in the cotton-seed meal. The protein and fat have their functions to perform in the animal economy, and the starchy matters their functions. One might almost with as much reason ask, Which is the most useful tool on the farm, the shovel or the hoe? The cotton-seed meal must be used more sparingly in the ration, and only where it is especially desired to increase the richness of the ration or protein, as, for instance, in the production of milk. About a quart may be given in a day's ration, either with hay or alone, or with corn meal and hay. Some even give two quarts, but the larger quantity should be used with some caution. For cows I should say that oil meal could be bought more profitably at \$2 a hundred than corn meal at \$1.50, especially if there is in the barn a sufficient supply of coarse fodder to use with the concentrated food. Oil meal is rarely mentioned in the ration for horses, but with a proper proportion of less concentrated fodder, such as hay and corn meal or oats, it may be fed at the rate of two pounds a day. The coarse fodder should be cut and moistened and the meal sprinkled over it. So fed, it would make no difference whether fed one, two or three times a day.

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**THE SQUASH BORER.** Farm and Fireside: Of late years it has become extremely difficult to obtain a stand of squash and melon vines, owing to the depredation of the striped squash beetle and the striped squash-vine borer. The first of these we should fight with London Purple or Pyrethrum; but for the borer, the bisulphide of carbon will be found the most satisfactory remedy. To apply it, make a small hole near the root of the plant with a walking stick or other instrument; pour in about half a teaspoonful of the liquid, and quickly close the hole with the foot. This liquid is extremely volatile, and its protective power is partly due to this property, as it diffuses itself through the soil around the roots of the plant, but does not injure the plant itself. The vapor of bisulphide of carbon is very explosive, hence extreme care must be exercised in handling it.



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### A PARALLEL.

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The thrift of a farmer and his degree of success in his chosen profession can be easily determined by the care which he bestows upon his farming tools. A man who uses the open field for a storehouse; who leaves his plow sticking in the last furrow of his fall plowing; who allows his reaper to remain out doors throughout the winter; who can never find anything in the way of tools, unless the entire farm is searched; whose harness is never properly repaired, about whose premises there is a general air of decay, ought not to expect success, and certainly his expectations will be realized. The man who takes a contrary view of things, who appreciates the importance of having a good storage shed where the farm tools can be stored and sheltered from the weather, and who passes the oft-recurring rainy days in repairing the very appurtenances that makes success possible, is the man who will reap the greatest reward. The cost of providing shelter for farming tools during the season when they are not in use is merely nominal, and the saving in time and money more than compensates for the expense. It is simply a question of dollars and cents to the average farmer, and it would seem evident where there is a lack of care in this respect that it is entirely unreasonable to count upon any marked degree of success. Machinery costs money, and its proper preservation ought to be considered of paramount importance.—*Farmer and Manufacturer.*

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### ATTRACTIVE HOMES.

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There is a money value to an attractive home, to say nothing of its influence in moulding the minds of those who are fortunate enough to be possessors of them. The faculty of making a desolate and worn-out place a really attractive one is an art possessed by few. It may be called tact, for such this natural faculty seems to be.

We have seen old farms so transformed by the re-building of crooked fences, a little underdrainage here and there, the buildings repaired, painted or whitewashed, trees properly planted about the house, that it would seem that hundreds of dollars had been expended, whereas the amount for labor and material would barely exceed the cost of two or three acres of land.

Every attraction in the way of shade and fruit trees, a neat and grassy lawn, neat fences of whatever kind, and rows of shade trees along the roadside, pays. Aside from this, to every true man or woman it is an

endless source of satisfaction to be the possessor of an attractive home. The man of wealth, or the one in moderate circumstances, who beautifies his home in the manner indicated, is in reality a public benefactor. It is neither very costly or expensive to beautify the home. Where there is a will, a way will soon be provided. Nor should it be forgotten that it is a duty we owe to the rising generation, that our homes be made more beautiful, home-like, and attractive by every means within our power.—*So. World.*

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### WEATHER FACTS AND PROBABILITIES.

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As we are passing through a period of very accentuated and trying atmospheric changes, the following ten short rules, by the use of which a person can stand beneath his own vine or fig tree, in any part of the northern hemisphere, north of latitude 15, and for hundreds of miles around him form an accurate opinion of how the wind and weather are progressing, may be of value. They were supplied some time ago to the Farmer's Club of the American Institute by a scientist of New Jersey.

1. When the temperature falls suddenly, there is a storm forming south of you.
2. When the temperature rises suddenly, there is a storm forming north of you.
3. The wind always blows from a region of fair weather, towards a region where a storm is forming.
4. Cirrus clouds always move from a region where a storm is progressing towards a region of fair weather.
5. Cumulous clouds always move from a region of fair weather towards a region where a storm is forming.
6. When cirrus clouds are moving rapidly from the north or north-west, there will be rain in less than twenty-four hours, no matter how cold it may be.
7. When cirrus clouds are moving rapidly from the south or south-west, there will be a cold rain storm on the morrow, if it be summer; and, if it be winter, there will be a snow storm.
8. The wind always blows in a circle around a storm, and, when it blows from the north, the heaviest rain is east of you; if it blows from the south, the heaviest rain is west; if it blows from the east, the heaviest rain is south of you; if it blows from the west, the heaviest rain is north of you.

9. The wind never blows unless rain or snow is falling within one thousand miles of you.

10. Whenever a heavy white frost occurs, a storm is forming within one thousand miles north or northwest of you.—*Rural World*.

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### FACTS ABOUT SHOEING HORSES.

A writer in *The New York Herald* states some facts about how horses should be shod, which are worthy the consideration of blacksmiths and farmers as well. Most of the horse-shoers of the country prepare the foot, fit a shoe, and secure it to the hoof in the same manner that a wood butcher fits a shoe to a wood ox-sled. The mechanism of a horse's hoof is one of the most wonderful and ingenious structures that can be found in all the works of the Creator. Beneath and in the rear of every hoof there is a frog, which is a tough and elastic pad for preventing injury to the animal whenever he plants his foot suddenly on any hard substance. Large rolls or cylinders of India-rubber are placed beneath railroad cars to prevent injury to any part of the car or to the cargo with which it is loaded. The frog beneath the foot of a horse is designed to subserve a similar purpose. If we look carefully at the young horse when he is trotting or running, it will be perceived that every foot is brought down to the ground in such a manner that the frog receives a powerful blow. By this means all injury to the animal is prevented. Science teaches us to permit the frog to develop and expand downward. But most blacksmiths seem to think that the All-wise Creator made a great mistake when he formed the hoof of a horse. Hence, they fall at the frog with red-hot burning irons, with edge tools, and with any other appliances that will enable them to remove this extraneous excrescence. Illustrious ninnies! Why not shave and burn away all the tough, callous, adipose tissue beneath their own heels, and allow the bear bones to rest on a plate of iron inside of their own boots and shoes?

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WORKING HORSES.—An ample bedding of fresh straw will do much to induce a tired horse to lie down and rest. Clean grooming and an occasional washing will also encourage restfulness and improve the appetite and health. Over feeding is not judicious, and will not restore flesh lost by hard work and want of comfortable rest. To prevent galls the harness should be washed and kept soft with castor oil.



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### FEEDING HORSES.

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It is impossible to lay down a rule as to feeding which would be inflexible as to quantity in all cases. What will keep one horse will not keep another, and sometimes all the feed in the world, if the animal could consume it, would not keep it in condition. It is not the stomach that needs the attention in such cases, but physical defects that must be remedied. The quantity of feed will depend upon the horse, the character of his work, and the kind and quality of the feed. But it is not the part of wisdom to feed our horses six quarts of oats at a meal regardless of all circumstances, and simply because we have been taught to do so, and have always done as we were taught. As we have said in these columns sometimes with reference to cows, we can say with reference to horses, that their individual characteristics should be studied, as far at least as is practical. Because it requires a peck of oats to keep a hard keeping horse, is certainly no reason why we should feed that extravagant quantity to one that will keep on four quarts. It should not be a rule to feed a horse all that he will eat, but rather as little as will keep him well. In this the horse differs from cattle, sheep and swine. A horse has no business to be as fat as a hog. In such a condition he is not fit to perform the work which is expected of him. While he should not be a skeleton, he should not be a mountain of fat. He should simply be kept in good condition, and as we should say in fair condition, perhaps it would better convey the proper idea to those who will insist that a horse is in good condition only when he is so fat that he waddles.—*Western Rural*.

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GEORGE W. WHITNEY, in giving his experience to the Vermont dairymen, at their tenth annual session, said to the average farmer: "Do not rush off to purchase an extra cow or thoroughbred animal; but rather rush to the cow stable and see what is being done there. Learn first the art of feeding, by practical experiment, and by so doing you will learn the animals you now have. You may be surprised to find what milkers you have. You may be surprised to learn how some of your cows will take on flesh while giving a little poor milk. Test every cow's milk; you may be surprised to learn how much butter some cows will make for a small quantity of milk. Should you find that you have no good milkers, buy a thoroughbred bull, if the pedigree is right. If you make butter exclusively, have a pedigree for butter; if cheese, a pedigree for cheese; if beef is your object, a beef pedigree. But if the pedigree is for blood only, don't buy."

### A CHEROKEE HOME.

At the close of my last letter, I said that we were about to try the hospitality and comforts of a Cherokee home at the conclusion of a long ride. Both were abundant, and a sketch may show what plenty and independence are to be found in far away regions of the Cherokee country. The house is situated in a natural locust grove, such as sprinkle the beautiful prairie to which their presence gives a name. It stands on an elevation in the midst of yard, garden, farmstead and field. It is not of logs, as is most common, but is what in the West is called a "frame house," and is built of sawed lumber from a neighboring mill. Like all houses in a mild climate that invite to spend so much of life out of doors, it has an ample piazza furnished with split or hide-bottom chairs, and containing a fixture handy for a basin and towel. The yard is decorated with native and cultivated flowers, rose-trees in large growth and of luxuriant bloom, and a honeysuckle wearing an odoriferous mantle of blossoms. Within, the house is comfortably furnished with antique bedsteads and cases of drawers that are evidently heirlooms, and perhaps came to the country with the emigration of the Cherokee people. Two ancient oil paintings ornament the walls, the farther and mother of our hostess, taken in old age by some artist who visited the country, and representing in both instances striking countenances, the farther having been the captain of a Cherokee company that fought the hostile Creeks at the battle of the Horse-shoe under Andrew Jackson. Tin-type portraits of our host and hostess, and the heir of the family, a bright boy now at school at the male seminary at Tablequah, complete the picture gallery. A few books and a number of newspapers furnish the reading matter. Everything is neat and clean, showing the presence of a notable housewife. In front of the house, in a natural dell over-shadowed by trees of magnificent growth, is a large spring of the clearest water and a spring-house of logs, from which emerges butter as hard and milk as cool as if it had been kept on ice. A well-filled smoke-house, hung with hams and fitches of bacon, stands close to the rear door, and broods of young chickens, turkeys, and guinea fowls give token of an unfailing supply of poultry and eggs. The farm buildings, chiefly log structures, for the storage of tools, stand in farm yards, and a large enclosure containing a hundred or more calves is beyond them, and through it passes a brook fed by another spring. On one side of and beyond this stretches a garden field of an acre or more, already, in the middle of May, furnishing green peas and new potatoes, and containing vegetables of



every kind and variety. Then come great fields waving with wheat, or showing the green rows of corn, forming a cultivated farm of upward of a hundred acres. A pasture for the mares and colts completes the enclosed land, but not the privileges of the farm, which includes an unlimited range of the prairie and woodland pasture for the cattle and ponies.—*Cor. of Providence Journal.*

### A BUSHEL, MORE OR LESS—ITS IMMENSE INFLUENCE ON THE COUNTRY.

There are now growing in this country, about forty million acres of wheat. A bushel, more or less, at harvest will make a difference of eighty million bushels in the aggregate crop. At \$1.25 per bushel, the value would be \$100,000,000. That sum diffused through the country, three-quarters to the producing farmers, and one-quarter to the railways, canals, lake and river shipping, and dealers—and from all these classes, passing from hand to hand, to merchants for goods, to manufacturers for their products—from these to workmen, and from these again to dealers in provisions, goods, etc., would be a wonderful stimulate to the entire business of the whole country—an influence sufficient to turn the scale from prosperity to depression, or the reverse. But the above is for a single product. There are over eighty million of acres in corn and oats. A difference of a bushel, more or less per acre in the yield of these, at an average of only forty cents per bushel, counts up \$64,000,000 more. Then, of say sixteen millions acres in cotton, the difference of only fifty pounds per acre, more or less at ten cents per pound, counts \$80,000,000 more. Passing over the dairy products, an immense interest, the potato, barley, rye and tobacco products, we have in the previously named crops, a difference of \$264,000,000, from so small a change in the yield, as a single bushel of grain per acre. And a single week of favorable or unfavorable weather throughout the country, between this time and the ingathering of the crops, will easily make all the difference we have noted, and thus affect the interest of the whole nation.

In this connection we may add, that if the Government Weather Bureau can in the slightest degree help the farming interests by early reports widely diffused, of the state of the weather, and the probabilities for a day or two in advance, and thus aid the cultivators of the soil in their plans and operations, Congress should not haggle a day or an hour over a few hundred thousand dollars appropriation to the Bureau to make it more efficient, while they vote away, without hesitation, tens of millions to clearing diminutive mud creeks and the erection of costly public structures where their chief use is to put money into the pockets of "constituents.—*Am. Agriculturist.*



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### USE OF MANURES.

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Some interesting observations have been exchanged at the National French Agricultural Society's meetings on the subjects of manures and soils. It would seem that even the best farm-yard manure should only be ranked as a complementary fertilizer. It is not the quantity of manure that is to be considered, but the value of its nutritive elements; these, again, to be viewed from their degree of solubility. Caution was recommended in reference to theories which regulate the dosing of soils with the mineral ingredients to replace the quantities removed by the crops. Such could not be regulated as if an interest table or a prescription. Besides, many of the useful principles contained in a soil are exhausted but very slowly. In the case of rotations, the destruction of animals injurious to plants ought not to be overlooked. The Nile, observed the eminent chemist, Dumas, deposits in its annual overflow a layer of silt only one 20th of an inch in thickness, yet that has sufficed to keep Egypt fertile since thousands of years. The permanent fertility of the Limagne, he continued, might be explained by the constant deposit of a frequent dust blown from the volcanic rocks of Auvergne, and known to be rich in phosphates and potash. Perhaps to the same cause may be attributed the vigorous vegetation of many orchidæ. M. Riser believes that the poverty of his soils at Caleres, in Switzerland, is due to the stripping their surface undergoes by violent winds.—*Farmers Review*.

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### HEN MANURE.

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*Editor Massachusetts Plowman :*

I have a quantity of hen manure which I wish to apply to land and harrow in for corn. Would it be best to compost before using, or apply without composting? and how many barrels ought to be used to the acre? Please answer in the *Plowman* and oblige,

Yours truly,

N. S. C.

*Enfield, April 8th, 1882.*

If the manure be dry and unmixed with other materials, it would be best to compost it with dry muck or loam. The composting should be done under cover, and if both materials are dry they should be moistened with water. If in addition to the loam or muck a bushel of wood ashes should be mixed with each barrel of manure, it would add very much to the value of the manure, but in so doing care must be

used to prevent the escape of ammonia, which is separated from the manure by the action of ashes. This can be done by keeping the heap well covered with dry muck, loam or plaster, and also sheltered from the rain.

The quantity to the acre depends so much on the condition of the land, and the quality of the manure, that without the knowledge of either it would be impossible to give directions of any great value, but to depend wholly on hen manure for a crop of corn we should rather have twenty bushels to the acre than fifteen. It would not be, in our opinion, the best policy to use all hen manure, but say ten barrels of this manure, well composted, and 500 pounds of fine ground bone, would give more satisfactory results.—[Ed.]

#### CHEMICAL CONSTITUENTS OF CLOVER.

An acre of good clover, says Prof. Kedzie, of the Michigan Agricultural College, will make 5,000 pounds of hay, containing  $282\frac{1}{2}$  pounds of mineral matter or ash. In this ash there will be  $97\frac{1}{2}$  pounds of potash, 96 pounds of lime,  $34\frac{1}{2}$  pounds of magnesia and 28 pounds of phosphoric acid. The hay will also contain 108 pounds of combined nitrogen. These are the stores of available material which an acre of Red Clover can offer to any succeeding crop when it is plowed under, and they are also available material which an acre of clover sod is capable of furnishing to a succeeding crop when a clover sod is plowed up, for it is found that the scythe leaves to the field as much material, both organic and inorganic, as it removes in the hay it cuts. In  $2\frac{1}{2}$  tons of clover hay, or in an acre of clover sod of corresponding quality, there will be, both for grain and straw, enough phosphoric acid for a crop of 34 bushels; of combined nitrogen for 71 bushels; of potash for 102 bushels; of magnesia for 120 bushels and of lime for 270 bushels. In other words, the clover hay or sod contains enough phosphoric acid for more than double the average crop, and nitrogen for more than four average crops, enough potash for more than six average crops of wheat! With such figures before us, need we wonder that farmers are surprised at the large crops they can raise on a clover sod? We see, also, why lands in rotation with clover can endure the heavy tax of two crops of wheat in succession without complete exhaustion.

Nearly all the birds that nest in holes, either in the ground or in trees, lay white eggs.

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### USEFUL HINTS FOR DAIRYMEN.

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The first question asked by dairymen is, What shall I do to cheapen the cost of milk? The speakers before have told us truly that we must improve our stock. And how? By carefully selecting cows adapted to your farms and the particular branch of the dairy business you wish to pursue. If you want to make butter or cheese, the Holstein is well adapted to your purpose if you have level lands; if your lands are hilly, you must select a smaller, more active breed. If your purpose is to make cheese, the Ayrshire is good. If you want to make butter on hilly pastures, take the Devon or Jersey. The Guernsey is a little too large. Having decided upon what you want to do, select from some of the old established breeds to suit your object in view, and then breed for it with the common stock for a foundation.

I believe that there is nothing so good for a cow, and to produce good, rich milk, as our native long-leaved, long rooted-grasses. Our bulbous rooted grasses can not stand the trampling of our cattle in our dry seasons. A good mixture for the pasture is two bushels of orchard with one of Kentucky bluegrass to the acre. In seeding for pasture, a little clover is an advantage, but not much. I never saw more than 8 lbs of clover to the acre. On lands costing less than \$100 per acre you can pasture cows profitably. If the cost is much over \$100, it is doubtful if you can rely entirely upon your dairy. I feed my land in proportion to the quantity I take from it. I cut my grass thrice. The first cutting I put away for spring feeding; the second and third for immediate use. The aftermath proves very attractive to my cows. This mode of cutting is very successful, and cheapens the cost of milk.

Another way to cheapen the cost of milk is to treat your cattle with uniform kindness. You can lessen the pasturage by judicious soiling. Ensilage is good for this purpose, and may even be fed in the summer for a change of diet. Ensilage, in the craze that has prevailed over it, has been over-valued. We have not found the genuine value of it. I think that by feeding roots with dry feed in winter you can increase the production of milk and cheapen the cost. Regular milking will cheapen the cost of production. Milk as nearly as possible at the same moment and in the same order at fixed and regular intervals three times a day. You can cheapen the cost of production by keeping your cattle clean in their winter quarters. Card them at least once a day.—*Harris Lewis.*



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Humorous.

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THE LAWS OF NATURE.

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BROTHER GARDENER'S PERSONAL EXPERIENCE AS TOLD TO THE  
LIMEKILN CLUB.

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Cottonseed White, of Glenrose, Texas, in a communication of a scientific nature, addressed to the President, asked as follows:

"Did you know that knowledge could be obtained by experience, and that experience is another name for suffering?"

"That about the time we grow wise enough to live we must fail and die?"

"That the most meritorious actions are often followed by the most disastrous consequences?"

"That this universe is governed by passionless, purposeless, inexorable, eternal law?"

"I know all about 'it," replied the President, with a shake of the head, "Iv'e bin right dar. My fust knowledge about a mule was gained by pickin' up one of his hind feet. I have in my kindness of heart lent my shotgun to a friend to shoot a crow, an' bin obleeged to pay fifteen dollars for de calf he killed. I have not only obsarved dat de universe am governed by passionless, purposeless, inexorable an' eternal laws, but have diskivered dat de man who goes fishin' on Sunday mus' buck agin de hull bizness. It am sad, an' yet we mus' brace up an' keep turning de grindstone."—*Detroit Free Press*

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A VALUABLE ANIMAL.

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About four thousand anecdotes have been narrated, in a recent publication, in which dogs have figured in heroic acts by which human life has been preserved, but we fail to remember a narrative which can be appropriately designated like the following. Now we do not mean to deny the truth of the many anecdotes such as we have mentioned, but we will say that of our personal knowledge we know none such. We had a dog once that saved things—a good many things, too—but there wasn't a life among them. He kept his things under a summer kitchen of ours, and his hiding place wasn't discovered for a long time; not indeed, until it became necessary to tear up the kitchen floor to find a good place to deposit some chloride of lime; then we found out what had been "saved by a dog." There were a couple of kittens, a cat, two or three rats, and a chicken, all dead, very dead; a large assortment of bones, the remnants of an ottoman, for the theft of which the best hired girl we ever had, hod been discharged; a couple of teaspoons, a goblet, an old hoopskirt, a lot of tin cans, a canary bird, a plaster of Paris pigeon and a cook book.—*Cincinnati Saturday Night*.

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We have received *under the frank* of our friend Orr, the genial, intelligent and efficient Secretary of this Company, a neatly printed poster or hand-bill, with the head-

ing: *Diversify your Crops.* Some very good reasons why this diversification should be done are given, but the visible object is to advertise the special manures of this well-known Company, which stands accredited for the faithfulness and purity of its mixtures for all their designed purposes. The Hand-bill only mentions two, which are now of a seasonable kind: The "Anchor Brand for Turnips" and the "Anchor Brand for Wheat."

Now, we have a word to whisper into friend Orr's ear: You may think this is a cheap and efficient way to advertise your manures, and it is all well as far as it goes, but the agricultural journals are the proper mediums for reaching the farmers. They and you are working towards the same ends—the increased production of the soil and the advancement of the great agricultural interests. You must make a living profit in your work, and so must the agricultural journals, else the work of both must fail. Send us your *advertisement*, and many farmers will see and keep it.

#### GOLD.

Sir Thomas Moore in his "Utopia" says: "Whereas they—the Utopians—eat and drink in earthen and glass vessels—which indeed be curiously and properly made, and yet of very small value—of gold and silver they make vessels that serve the most vile uses; not only in their common halls, but in every man's private house." Furthermore, "they make great chains and fetters and gyves of the same metals, wherein they tie their bondmen; and they marvel also that gold, which of its own nature is a thing so unprofitable, is now among all people of so high estimation, that a man himself, by whom, and yea for the use of whom, it is so much set by, is in much more estimation than the gold itself. Inasmuch that a lumpish-block head-churl, and which hath no more wit than an ass, yea and as full of naughtiness as of folly, shall have, nevertheless, many wise and good men in subjection and bondage, only for this—because he has a great heap of gold."



WE HAVE not the time to answer in a private way questions in respect to farming practices; and such questions we will always submit to the *Planter's* readers, and thus obtain better responses than we can give. At the same time, we shall not be unwilling to withhold our own views, or any practical experience we may have had on the subjects which may be presented.

#### NORFOLK AS A BUSINESS CENTRE.

WE have been furnished by CARY W. JONES, Esq., the author, with the third edition of this well gotten-up work. It is handsomely illustrated with many of the prominent buildings of the city, including churches, hotels, banks, stores, Navy-yard, U. S. Hospital, &c. The letter-text is good, and gives a very full account of the present trade and future prospects of the "city by the sea." One of the interesting features of the book is a sketch of the early settlement of the city, commencing in 1552 with the little Indian village, *Chesapik*, and its growth to the present time.

#### DUNTON'S TROTTING HORSE BREEDER AND TURF MANUAL.

This book is published by FRANK H. DUNTON, Editor of *Dunton's Spirit of the Turf*, Chicago, Illinois. It is said to be a very complete work of its kind. A copy has been sent us, and the examination we have been able to give it assures us that it contains much valuable information for turf-men. It gives names, size, and full description of all trotting and pacing horses with standard records, their breeding, their present owners, and the names of drivers who gave them their best records. Price, 25 cents per single copy.

DEPARTMENT OF THE INTERIOR. Bulletin No. 7. *Insects Injurious to Forest and Shade Trees*. By A. H. PARKER, Jr., M. D. Washington: Government Printing Office. 1881.

This is a useful compendium of 275 pages. Within a convenient compass, it gives an excellent account of the various insects that prey upon forest, shade and fruit trees, with very many wood cuts—the latter assisting the reader in a wonderful manner

in forming an idea of the insect in its different stages of development. This compendium should be in the hands of those persons interested in forestry, planting and cultivating shade trees. The diffusion of such information should attract the notice of the public, and lead owners of land to pay some attention to the subject and do something towards checking the ravages of noxious insects.

The number of known insects that attack the different kinds of trees in the United States is sufficiently large to excite great fears for the future prosperity of our diminished forests, unless the entomologist interposes farther research in this direction. The author expresses the hope that all persons interested will aid by the communication of notes and specimens for publication. "Insects in the larva and pupa stages may be put into alcohol, while the adult beetle or moth may be pinned or enclosed in a tin box, and the latter sent by mail; alcoholic specimens accompanied with the wood or bark or fruit infested, could be sent by express. Specimens showing the mines or burrows, or pressed and dried leaves containing the mines of leaf-borers, or twigs injured by twig-borers would be welcome. For purposes of full description and illustration coleopterous larvæ, as well as caterpillars, should be placed at first in weak alcohol, and after forty-eight hours transferred to alcohol of full strength."

It is to be hoped the author will succeed in inducing the United States Government to order the publication of an extended report, with the necessary illustrations, at no late period. Bulletin No. 7 does credit to the author.

#### SOUTHERN CULTIVATOR AND DIXIE FARMER.

The July number of this valuable journal comes promptly to time. It should be a matter of pride with Southern farmers to sustain the *Cultivator*, for it is one of the best filled and most reliable agricultural publications in the South. It uses well glazed paper and is quite handsomely illustrated. We will send a copy of it, together with the *Planter*, one year for \$2.25. So send us your orders.



## HOUSEHOLD HINTS.

INTERESTING TO HOUSEKEEPERS—How PEPPER AND SPICES ARE ADULTERATED.—“What do you do with your cocoa-nut shells?” asked a *Record* reporter of a prominent candy manufacturer. “Sell them to be made into pepper,” said he, and the aroused curiosity of the reporter was not quieted by the further statement that the shells were really ground and used by spice men to adulterate pepper and other of their wares. Further investigation showed that a factory where the shells are ground up is situated at the corner of Lime street and the railroad in Camden, and is a one-story brick building, the capacity of the mill being about two tons of ground shells per day. The shells are brought to the factory in bags and deposited in the roasting department. Here they are carefully scraped and put in great revolving ovens, which are constantly turned over beds of blazing coals. Some of the shells are roasted a light brown, while others come out crisp and black. After being carefully sorted, the dark shells are put into hoppers, in the grinding department, and reduced to a fine powder like pepper. The brown shells are not ground so fine, and come from the mill looking exactly like ground coffee. This Camden factory is said to have been in operation for about a month. The shells cost very little, and the milling is done at an expense of about two or two and one-half cents per pound.

A representative of a leading spice house, in speaking of this novel preparation, said that while his house had not used it, he supposed that it was a harmless adulterant for spices. “We have our own methods of adulteration,” he said, and sell to the trade probably more adulterated goods than pure. We can’t help it. There is no pretence on our part that the lower grades of spices are pure. We simply sell the retailer what he wants. We sell them spices as low as eight and nine cents, but it is about as much something else as it is pepper. It would ruin the trade to prohibit adulteration, and, besides, there are not enough spices grown to supply the demand of the United States alone, if nothing but pure spices were sold. We are constantly making experiments to discover the cheapest harmless foreign matter with which we can make our goods, in order to supply the demand for low grades.

The powder made from ground cocoa-nut shells has a fine color, and on account of its weight and appearance, is considered by spice manufacturers to be choice adulterating material.—*Philadelphia Record*.

## SOD-POTS:

To the Editor of the *Telegraph* :

A few years ago Prof. A. D. Lee, of the “One Study University,” invented and patented a novel arrangement for propagating garden and house plants. A blue-grass sod is pared off as thin as possible and cut into strips about four inches wide. These strips of sod are placed in a kettle of boiling water and left long enough to effectually scald the grass. The sods are taken out and cut into pieces that will wrap around a two-inch wooden pin; two strings are tied around the outside; the pin is pulled out, and the inside of the sod pot is filled with fine mellow soil and the seed planted in the top.

These sod-pots are placed in the hot-house, and by the time the danger from frost is past, the plants will be half-grown and can then be moved and the pots set in the garden without danger to the plant, as is usually the case in transplanting. These sod-pots can be placed in boxes and kept on a bench in the kitchen at night, and carried out on warm sunny days. By the use of sod-pots, tomatoes, cucumbers, melons and many other vegetables can be matured three weeks or a month earlier than by the old method. J. M. HARRISON.

*Harrison county, O.*

IMPROVEMENT ON BUCKWHEAT CAKES.—The demonstration that the seed of amber cane is capable of being manufactured—simply by grinding and bolting the same as wheat—into the most perfect buckwheat flour with none of its numerous qualities, makes the present cultivation of the cane, whether for syrup, or the canes to be fed to stock, one of double profit, for on each acre of good corn there is about twenty bushels of fine seed, worth for flour \$1.25 per bushel, which places the value of cane a full average of wheat, and besides leaves the stalks to be fed, they being superior to any wheat straw. The difference is so slight between the flour of sorghum seed and buckwheat that only an expert can tell it, and as there is no danger in overdoing the buckwheat cake market, the demand for this flour will be an increasing one. As a food for stock, the seed—coarse ground—is rated as of higher quality than corn, from the fact that it is of heavier quality or weight per bushel, and of a more fine grain, and thus is made more easy to assimilate.

God is attracting our regard in and through all things. Every flower is a hint of his beauty; every grain of wheat is token of his beneficence; every atom of dust is a revelation of his power.—*W. H. Furness*.

*Editor Southern Planter :*

I am anxious to try an acre of onions this fall, and want to plant the seed in September. I should like to know what is the best onion for this section. In Ohio they have great success with the "Yellow Danvers." Having planted the seed in September, would it do to thin out to two inches and replant those thus removed?

Yours, &amp;c.,

D. K. M.

We hope one or more readers of the *Planter* who may have some experience in the cultivation of the onion will reply to our correspondent's enquiries. If such replies are received before the 20th of August, they can appear in the September number, which will be ready for the mail on the 1st of the month, or a few days before. It is an interesting subject, and we hope our readers who have any experience on it will not overlook it. *Withersfield*, Connecticut, and other places in that State of *wooden nutmegs*, have been the *onion centre* of the United States, but now it seems to be moving southward, as are certain other industries heretofore monopolized by our Northern friends. In one of our exchanges from *Florida* we see the *Japan onion* highly recommended for good results as a field and marketable crop from that State.

*Editor Southern Planter :*

I am about through securing the only good oat crop I have seen or heard of, attributable only to the fact of being seeded early last fall; in fact, the larger part was seeded at last working of corn, but due to dry weather did not come up for two months. Will you be so kind as to inform me how soon I can venture to seed oats, and whether there is any new variety of winter oats you can recommend, and if so, from whom to be gotten?

Respectfully yours,

W. N. TAYLOR.

*Common P. O., King George Co., Va.*

On the receipt of our correspondent's letter we addressed postal cards to several farmers whom we thought best posted on the subject of winter oats. So far we have had only one or two replies, and we are compelled to go to press. It is the opinion of Dr. A. H. Perkins, of Ashland, Va.,

that the *Red Rust-proof oat* is the best and surest for a good crop. It is best to sow it at any time between the first and last of September. Earlier sowing, with a mild fall, may advance the crop too far into the stem before cold weather sets in.

The seed may be had from the seedmen of Richmond, and Dr. Perkins has a small stock beyond his wants.

## MAKING HAY.

JOSEPHINE POLLARD.

Out in the meadow tossing the hay,  
Rich with the scent of clover,  
Out in the meadows the livelong day,  
Turning the grasses over,  
Robert is busily working away  
From morn until day's declining;  
Working away and making hay  
While the summer sun is shining!

He whistles and sings, for his heart is light,  
And gay as the sunshine o'er him;  
And smiles illumine his face so bright,  
As he tosses the hay before him;  
And in and out through his thoughts all day,  
Are fancies their threads intertwining,  
While he's working away and making hay  
While the sun is brightly shining.

Winds of summer are ready to blow  
Over the grasses and under,  
As soon as the farmer chooses to go  
And scatter the heaps asunder;  
And out on the high road far away,  
The perfumed message divining,  
Some one will say, "They're making hay!  
And brightly the sun is shining!"

Then after the toil of the day is done,  
The cattle are under cover,  
When low in the west declines the sun,  
Where goeth the farmer lover?  
Toward the village he taketh his way,  
His heart with a message laden;  
For the lad so gay has something to say  
To-night to a certain maiden.

And under the balmy evening skies,  
In the glorious summer weather,  
With stars a gleam in each other's eyes,  
They wander away together.  
And should you meet them (perchance you may),  
You'd know by her blush so charming,  
That love has a way of making hay  
Unknown to the rules of farming.



## MAGAZINES.

THE POPULAR SCIENCE MONTHLY for August. D. Appleton & Co. New York. \$5.00 per annum.

We cannot well discriminate between the articles which make up its table of contents. They are all good. "The National Necessities of National Education," "The Chemistry of Sugar," "How Plants Resist Decay," "Literary Notes" are some we have been able to read.

NORTH AMERICAN REVIEW, for August, contains "Progress of Thought in the Church," by the Rev. H. W. Beecher; "Organization of Labor," etc.

HARPER'S MONTHLY is always rich and novel in matter and illustrations, and so are their *Weekly* and *Young People*, which are received regularly.

ST. NICHOLAS for August.—We have been favored with some of the advanced sheets of this excellent magazine for August, which will be issued on the 23d instant. It will be well adapted to the general reader, and will be an agreeable companion to people who travel during this warm month, and need interesting and instructive reading. Its table of contents is too long to be specified.

EVERY SATURDAY and Commercial Advertiser. H. S. Ackerly, Publisher and Proprietor, R. G. Agee, Business Agent and Correspondent. Price \$2.60 per annum.

We have been intending to speak of this regular visitor to our table, and do so now. It is an interesting *weekly* and a good family paper. Its selected stories and other reading matter are always interesting. In its advertising department it seems to make a specialty of *business cards*, and its elaborate *business directory* of Richmond should commend it to country readers and farmers who have business relations with the city.

## CATALOGUES.

BULLETIN of the Bureau of Immigration and Mining Intelligence, established by the Norfolk and Western, Shenandoah Valley and New River Railroad Companies. It advertises the lands, coal fields, and other mineral properties on their lines. Address J. B. Austin, Manager, Wytheville, Va.

POMONA NURSERY, Wm. Parry, Parry P. O., New Jersey.—We call attention to the advertisement of this valuable nursery. The season for stock will soon be at hand, and persons in need of it should write for the catalogue of Mr. Parry.

## LIST OF PATENTS

Relating to agricultural implements and machines, issued from the United States Patent Office, Tuesday, June 6th, 1882, and prepared expressly for this paper by Messrs. C. B. Steele & Co., counsellors at law and attorneys for inventors, Washington, D. C.

Roller Grinding Mill Samuel L. Bean, Washington, D. C.

Baling Press—Axell E. Bloomburg, Hackett City, Ark.

Milk Can—Charles S. Shepard, Cherry Creek, N. Y.

Sulky Plow—Wm. L. Cassaday, New Carlisle, Ind.

Horse Hay Rake—Thos. W. Greene, Lansing, Mich.

Automatic Gate—Nathan H. Long, Muncie, Ind., assignor of one-half to Wm. B. Kline, same place.

Composition for Preserving Eggs—George W. Mowry, Geneva, N. Y.

Washing Machine—Ira Munson, Wayne, Mich.

Washing Machine—J. Robinson, Pulaski Township, Williams Co., Ohio.

Harrow—Henry R. Burger and Joseph B. Simpson, Fincastle, Va.

Plow—Lewis Gibbs, Canton, Ohio.

Manufacture of Fertilizing Material—F. L. Harris, Harrisonburg, Va.

Grain Thresher and Clover Seed Huller—Chas. H. Horton, Wellington, Ohio.

Check Raw Corn Planter—Joseph Morava, Castle Rock, Wis.

<p><b>The</b> <b>New</b></p>	<p><b>GRAPES</b></p>	<p><b>Prentiss,</b></p>
<p>Extra quality. Warranted true. Cheap by mail. Low rates to dealers. Illustrated Catalogue free. T. S. HUBBARD, Fredonia, N. Y.</p>		

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genne, Moore's Early, Brighton, Jefferson, etc.  
Prices reduced. Also other Small Fruits and all older varie-  
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## THE STATE FAIR—25TH OCTOBER, 1882.

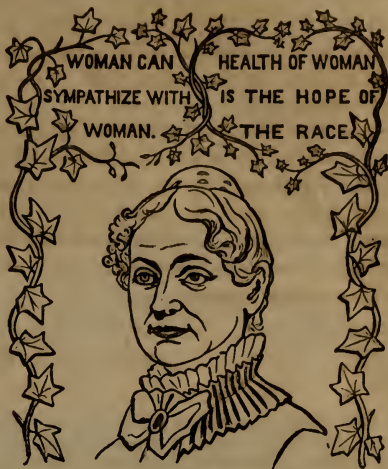
The financial affairs of the State Agricultural Society have been adjusted through the aid of the city of Richmond. Next comes a Fair for the present year, and, we hope, for many following years. The capital city of the State—the abiding place of the Society—having done its part, what will the people and farmers do? They have cause for thanksgiving for the beautiful harvests already reaped, and for the prospects of crops yet to mature. They are, therefore, in a condition to take an active part in the objects of a State organization which has so long labored for the development of agriculture and other great material interests of the State. They can unite in the membership of the Society, can come to the Fair and bring with them their wives, sons and daughters; can contribute of the products of their farms, households and factories, and unite in an honorable contest of merit for the awards which will be offered. They can have recreation and enjoyment at the same time, and return to their homes with much information gained and stronger impulses for renewed efforts in their business pursuits.

In our last issue we said something on the beneficial influence of our State Fairs, which it is unnecessary to repeat; and, therefore, we say now, do not neglect a duty, a pleasure, and an interest in respect to the attendance on and contribution to them.

FOOD for the brain and nerves that will invigorate the body without intoxicating is what we need in these days of rush and worry. Parker's Ginger Tonic restores the vital energies, soothes the nerves and brings good health quicker than anything you can use.

"ROUGH ON RATS."—The thing desired found at last. Ask druggists for "Rough on Rats." It clears out rats, mice, roaches, flies, bed bugs. 15c. boxes.

THE success of Mrs. Lydia E. Pinkham's Compound for the several diseases peculiar to women, forcibly illustrates the importance of her beneficent discovery and the fact that she knows how to make the most of it.—*Dr. Haskell.*



*Yours for Health*  
*Lydia E. Pinkham*

### LYDIA E. PINKHAM'S VEGETABLE COMPOUND.

A Sure Cure for all FEMALE WEAKNESSES, Including Leucorrhœa, Irregular and Painful Menstruation, Inflammation and Ulceration of the Womb, Flooding, PROLAPSUS UTERI, &c.

Is Pleasant to the taste, efficacious and immediate in its effect. It is a great help in pregnancy, and relieves pain during labor and at regular periods.

PHYSICIANS USE IT AND PRESCRIBE IT FREELY.

FOR ALL WEAKNESSES of the generative organs of either sex, it is second to no remedy that has ever been before the public; and for all diseases of the KIDNEYS it is the Greatest Remedy in the World.

FOR KIDNEY COMPLAINTS of Either Sex  
Find Great Relief in Its Use.

LYDIA E. PINKHAM'S BLOOD PURIFIER will eradicate every vestige of Humors from the Blood, at the same time will give tone and strength to the system. As marvellous in results as the Compound.

Both the Compound and Blood Purifier are prepared at 233 and 235 Western Avenue, Lynn, Mass. Price of either, \$1. Six bottles for \$5. The Compound is sent by mail in the form of pills, or of lozenges, on receipt of price, \$1 per box for either. Mrs. Pinkham freely answers all letters of inquiry. Enclose 3 cent stamp. Send for pamphlet. Mention this Paper.

LYDIA E. PINKHAM'S LIVER PILLS cure Constipation, Biliousness and Torpidity of the Liver. 25 cents.

Sold by all Druggists. (3)



**Sent FREE!**  
TREATISE ON  
EVAPORATING FRUIT  
Profits and General Statistics.  
American Mfg Co., Waynesboro, Pa

THE VIRGINIAS for June is received, and contains an attractive table of contents. The original articles point to the State developments to be made through the Chesapeake and Ohio, Norfolk and Western, Richmond and Alleghany, and Shenandoah Valley Railroads. It has also an editorial notice of the early iron works in Virginia, and the present indications and workings of iron ores, coals, limestones, etc. It is a very readable number to all interested in the development of the minerals of our State. Published by Maj. Jed. Hotchkiss, Staunton, Va.

THE man who knows nothing of Mrs. Lydia E. Pinkham and her sovereign remedy for women, is wanted for a jurymen. The fact clearly proves that he does not read the papers.—*N. H. Register.*

A SAFE and sure means of restoring the youthful color of the hair is furnished by Parker's Hair Balsam, which is deservedly popular from its superior cleanliness.

## Belmont Stock and Stud Farm.

STALLIONS for use or sale. THOROUGHbred, TROTting, RIDING, LIGHT and HEAVY DRAFT BREEDS, in pairs and single harness.

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Every animal of my breeding except three Imported Percheron Stallions and one Mare. They are the coming horses for harness uses. I know no equals in a half-century of active and extensive experience, more than half that time breeding SHORT HORNS, and wish no other in a fair grass country, with fair keep. Have also

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Near Charlottesville, Va.

Aug 1—1t

## STRAWBERRIES!

Newest and Best Varieties.

Grown in Pots, and ready for shipment after July 25th. If planted early, will give a good crop next season. New descriptive priced catalogue containing full cultural directions mailed free.

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Aug 1—2t

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For Roofs, Walls and Ceilings in place of plaster. Samples and catalogue mailed free. W. H. FAY, Camden, N. J.



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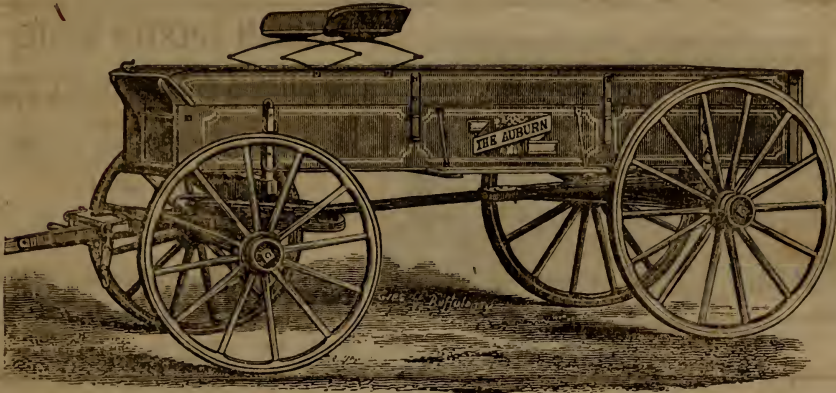
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Catalogue of Implements mailed free to any address.

WATT & CALL, Main Street, corner Fifteenth.

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Aug—1y



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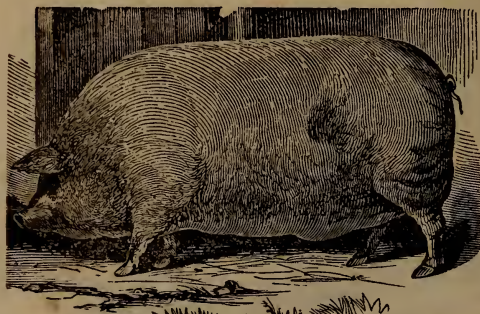
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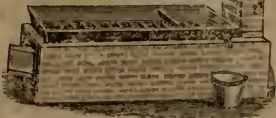
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PORTABLE  
FARM MILLS**

For Stock Feed or Meal for Family use.  
**10,000 IN USE.**  
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**Simpson & Gault M'fg Co.**  
Successors to STRAUB MILL CO.  
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# NORFOLK & WESTERN RAILROAD.

Time Table in effect June 18, 1892.

WASHINGTON TIME.	WESTWARD DAILY.	
	No. 1.	No. 7.
Leave Norfolk.....	12.15 p. m.	.....
" Suffolk.....	1.05 " "	.....
Arrive Petersburg.....	3.20 " "	.....
Leave Petersburg.....	3.30 " "	.....
" Burkeville.....	5.38 " "	.....
" Farnville.....	6.23 " "	.....
Arrive Lynchburg.....	8.20 " "	.....
Leave Lynchburg.....	8.50 " "	2.46 p. m.
" Liberty.....	9.50 " "	3.33 " "
" Roanoke.....	11.05 " "	4.39 " "
" Christiansburg.....	12.34 a. m.	6.00 " "
" Wytheville.....	2.36 " "	8.05 " "
" Marion.....	3.42 " "	9.06 " "
" Abingdon.....	4.52 " "	10.14 " "
Arrive Bristol.....	5.25 " "	10.45 " "

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At PETERSBURG, with R. & P. R. R. for Richmond and points on C. & O. Ry., Fredericksburg, Washington, Baltimore and the North and East. Through Pullman Car from Petersburg to New York. Solid trains Petersburg to Washington.

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At B. ISTOL, with East Tenn., Va. & Ga. R. R. for Knoxville, Dalton, Chattanooga and all points South, West and Southwest.

WASHINGTON TIME.	EASTWARD DAILY.	
	No. 8.	No. 4.
Leave Bristol.....	11.40 p. m.	5.00 a. m.
Arrive Abingdon.....	12.14 " "	5.29 " "
" Marion.....	1.25 a. m.	6.31 " "
" Wytheville.....	2.33 " "	7.31 " "
" Christiansburg.....	4.29 " "	9.28 " "
" Roanoke.....	5.52 " "	10.45 " "
" Liberty.....	7.02 " "	12.15 p. m.
" Lynchburg.....	8.00 " "	1.15 " "
Leave Lynchburg.....	8.20 " "	.....
Arrive Farnville.....	10.14 " "	.....
" Burkeville.....	10.57 " "	.....
" Petersburg.....	12.55 p. m.	.....
Leave Petersburg.....	1.05 " "	.....
Arrive Suffolk.....	3.18 p. m.	.....
" Norfolk.....	4.05 " "	.....

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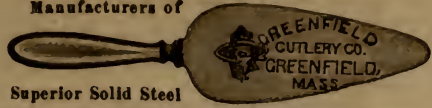
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